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THE SCHOOLS AND THE NATION

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THE SCHOOLS AND THE NATION

BY

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AUTHORISED TRANSLATION BY

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WITH AN INTRODUCTION BY

VISCOUNT HALDANE

FOUR ILLUSTRATIONS OF CONTINUATION SCHOOLS

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Vocational education
Evening and Continuation school
Industrial education

AUTHOR'S PREFACE TO THE ENGLISH EDITION

WHEN we compare the development of the educational system of the modern State with the development of its political, military, social, and industrial institutions, we can see at once that the former remains a long way behind. This is due not only to the tendency of nations to devote a great deal more attention to the improvement of their physical and material resources than to the cultivation of their spiritual and intellectual powers, but also to the fact that existing educational institutions are not nearly so effective as they might well be without any appreciable increase of cost.

There are two defects in particular which we must deplore: (*a*) the failure to render the present school system an effective instrument in the cause of civic education; (*b*) the almost complete absence of any adequate provision for the continued training of boys and girls between the ages of 14 and 18—for that part of the population which earns its daily bread through the practical work of commerce, handwork, industry, or agriculture. In the last fifteen years we have made great efforts in Germany gradually to remedy our deficiencies in this latter respect; but with regard to

the first problem, we, too, have left very much undone in the matter of conscious striving for the desired end. For my part, I have done my best during the past twenty years to direct the attention of my country to these two defects, and some record of my efforts will be found in these essays and addresses, as well as in many of the institutions which they describe, and which have come within the sphere of my activities.

It is not merely by chance that these speeches have found an echo in other countries. For all modern civilised nations experience the same pressing need—a need that makes a speedy solution of the problem essential. Hence it is that my addresses have, during the past five years, been translated into a number of languages; and I am delighted that an English translation of this volume is now added to the list, since several of my other writings have already appeared in England and America.[1]

I am all the more pleased in the case of this book, because so distinguished a thinker as Viscount Haldane has honoured it with an Introduction, and because the translator, Mr. C. K. Ogden, has set about his laborious task with a thoroughness which should render the work a model of accuracy. I trust that this translation will also contribute something to secure for the admirable little book entitled "The Problem of the Continuation School,"[2] in which Mr. Ogden has co-operated with

[1] Especially "The Idea of the Industrial School" (Macmillan, 1913, 2s. net), and "Education for Citizenship" (Harrap & Co., 1912, 2s. 6d. net).

[2] "The Problem of the Continuation School, and its Successful Solution in Germany: a Consecutive Policy," by R. H. Best and C. K. Ogden. Pp. 80+xvi, with an Introduction by Dr. Kerschensteiner, and sixteen photographs (P. S. King & Son, 1914, 1s. net).

Mr. Best to apply the principles here outlined to English conditions, the wide circulation it certainly deserves.

But it is not the mere honour of recognition which constitutes the chief ground of my pleasure. I have grown too old in the struggle for educational ideals to let such personal satisfaction turn my head. Much more important for me is the thought that in so far as other great nations occupy themselves with the spiritual and intellectual elevation of their people, Germany too will reap the benefit of their efforts. The rivalry of two countries in the matter of education is far more welcome, far more profitable, and far more glorious than any competition in armaments. When two neighbours are each truly educated both may dare to live in peace and to devote all their strength to the improvement of their own homes and their own families. The more progress a nation makes internally, the more peaceably will it settle all external differences; and a man can do his country no greater service than by exerting his powers to help other nations in their struggle for moral and intellectual progress, that they may not only uphold the cause of liberty, but may be themselves animated by a spirit of justice and goodwill.

I have been in England often enough to have learnt, like all Germans who know it well, to love the people and the country. I have often held up certain educational institutions as models to my fellow countrymen, and many of the examples I have taken will be found in the addresses collected in this volume. It is often the case that a man who enjoys some advantage sees his good fortune in a different light from those who envy his position. For every blessing on earth has its imperfections, and it is chiefly those who seek to make

some precious thing their own who are fascinated by its brightness. Even those of our German schools which meet with such universal admiration have their defects—and this book has its origin in an attempt to discover some of those defects, and at the same time to indicate the methods by which they may be remedied.

Many of them no doubt are common to schools the whole world over, for all alike trail behind them the heavy weight of their past, and more than any other social institution are hampered by the prejudices of a rigid conservatism. Proposals for the removal of these imperfections will therefore find everywhere the same interest, if only they can commend themselves as capable of practical realisation. So I hope that my work will succeed in winning the attention of the English reader who has the welfare of his people at heart.

GEORG KERSCHENSTEINER.

Munich, *March*, 1914.

TRANSLATOR'S NOTE

My desire to translate Dr. Kerschensteiner's "Grundfragen der Schulorganisation" was partly the result of a study of recent developments in the Trade-Union movement lately published in Professor Jaffé's "Archiv für Sozialwissenschaft und Sozialpolitik": and its realisation was made possible in the summer of last year, when I was able to visit Munich and to make a detailed study of the Munich Continuation School system with which so large a part of this book is concerned. In the chapters dealing with the problems of the Continuation school I have only occasionally (as on page 132) felt that an explanation was necessary to supplement the words of the text; and if the reader desires to see how some of the principles here outlined might be applied to English conditions I may perhaps be allowed to refer him to the little volume by Mr. Best and myself to which Dr. Kerschensteiner alludes in his preface. With regard to the two concluding Chapters of the book all information necessary for those unfamiliar with the subject will be found in Dr. Wychgram's "Secondary Education in Germany," which my friend, Mr. Dawes, Headmaster of the Castleford Secondary School, is publishing with the Cambridge University Press this spring. In my own translation I have preferred to render "höhere Schule" by the words "higher school," since I regard it as essential that we should think of the Etons and Harrows of Germany as included under this head; which is too apt not to be

the case when we speak casually of "secondary schools" in England. Other similar preferences in the interests of clarity hardly seem to call for special comment here; the expert will note them as they occur without, I hope, being unduly offended.

Throughout my task I have enjoyed the encouragement and assistance of many English admirers of the work. First and foremost I have to acknowledge my indebtedness to Mr. E. B. Wareing, lecturer at the Commercial University in Munich, whose accurate knowledge of German life and presence in this Mecca of educationists have been invaluable to me. To Mr. Best, with whom I have co-operated in the study of the German Continuation School system mentioned above, I owe many important improvements suggested by his wide technical experience; while Dr. S. S. F. Fletcher of the Cambridge Training College, and Miss M. I. Anderson, herself an experienced translator, have very kindly read through individual chapters and helped me with suggestions.

Finally, I have to thank the author himself for revising the whole of the translation in proof, as well as for doing everything in his power to assist me—both when I was with him in Munich, and by his detailed replies to the many letters with which I have bombarded him in the Reichstag during the progress of the work. To the appreciation which the author has expressed I must add my own thanks to Viscount Haldane for honouring the English translation with so comprehensive an introduction.

C. K. OGDEN.

MAGDALENE COLLEGE,
CAMBRIDGE.

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INTRODUCTION

By Viscount Haldane

The century on which we have entered promises to be one of remarkable developments. New movements are disclosing themselves everywhere, movements that appear certain to exercise a profound influence on life. In science great discoveries have been made which bear closely on the constitution of matter. They have resulted in wireless telegraphy and other inventions which promise to effect far-reaching modifications in the obstacles which time and space present to the intercourse of nations. Aerial navigation is still in an early stage, but it has already made a formidable impression upon the old-fashioned organisation for war. The growth of new ideas in biology is beginning to revolutionise medicine, as it has already revolutionised surgery.

But besides fresh phases of this kind, there is arising something else the far-reaching character of which is getting to be realised. Democracy is becom-

ing a reality. The possessors of new and increasing political power are finding their feet, not less abroad than in this country. As their education and knowledge increase they are pressing more and more each year for better social conditions and for a larger share in the fruits of industry. The movement is one to be welcomed if it proceeds on right lines, the lines along which it may develop and not hamper national life. But no compulsion can secure that it will proceed along those lines. The democracy cannot be driven. It can only be supplied with the knowledge and training which may guide it to seek its own salvation in a better State with higher ideals. To provide this knowledge and training education of an advanced kind becomes a vital necessity.

It is with a system which has such education as its object, a system which is now in operation in various parts of Germany, and which is being introduced into America, that this book deals. For Dr. Kerschensteiner is a pioneer in a movement of far-reaching scope, a scope so far-reaching that its significance has not yet been appreciated in this country excepting by comparatively few people. And yet it is a movement with which we have to reckon. If we do not keep up with it our workmen will in the course of a few years compete with their fellow-workmen abroad at a serious disadvantage. The latter are beginning to enjoy, under the new method, a training and opportunities which

have no counterpart here. Some of the educational authorities in Great Britain, those in London and in three or four other great cities, are quite alive to what is going on, and are making efforts to keep up in the race. But public opinion in this country is slow to awaken, and unless it does and gives its definite mandate to the local authorities, the latter have little power to help.

It is therefore a source of satisfaction to some of us that Mr. Ogden should have presented Dr. Kerschensteiner's remarkable book in an English form. The spirit of the distinguished German author is so cosmopolitan, and his ideals are so high, that what he has written seems to me as well calculated to move opinion here as it has proved potent in moving opinion in Germany. The sixth chapter purports to give an account of the reconstitution of the Trade Schools in Munich. But under this modest title it sets out a new principle and describes how it has been translated into practice. After giving an account of the old Continuation Schools—which, by the way, appear to have themselves been in advance of most things of the kind that exist to-day in this country—Dr. Kerschensteiner tells how the absence of a practical character in the teaching made work there uninteresting to the pupils on the one hand, and to their present and future employers on the other. What rendered things more difficult was a great advance in the division of labour which tended to give

a one-sided character even to good workshop teaching. The schools themselves were directed only to what was technical, and ignored the fact that modern economic conditions are calling out for a commercial education, and modern social conditions "for a civic education of the hand worker." The existing principle of instruction, too, was defective not only in its object, but in its application. It tended to turn "a good decorative painter into a bad artist, a capable joiner into a mediocre furniture designer or into an 'architect,' a stone mason into a sculptor, or a watchmaker into an electro-technician." Dr. Kerschensteiner, after thus indicating the causes of failure, goes on to define the conditions of success. His first condition is, and has been throughout, the revival among the employers of industrial groups of an interest in the work of training. By degrees he succeeded in stimulating this interest. The employers assumed a new attitude as soon as the idea of the "General" Continuation School was put aside in favour of the Special Continuation Schools for particular trades. The mere idea of this was not new, but what was new was the organisation of a school with a single trade as its basis, and for the municipal schools to have the corresponding trade combination linked up with each single trade school. "The connection between trade associations and trade schools was established by allowing the former a share in organisation and inspection, by giving them the right to appoint properly

paid and thoroughly capable master-workmen or journeymen as teachers, and by getting them to supply materials for the practical work, and models for trade drawing; while the local education authority was responsible for buildings, salaries, machines, tools, and other necessary school apparatus."

After describing his initial difficulties and disappointments, Dr. Kerschensteiner goes on to describe how a new social spirit began to be awakened, and how the sense of the duty of personal sacrifice was stimulated. "Never have I realised more clearly how a rational education can work wonders not only with the pupils but also with their employers, who are delighted by the successful work. The harsh selfishness of the individual disappears, the need of forming one great community is felt, and the hope of a good harvest strengthens the readiness of sacrifice. And with the pupil, too, the change was equally marked. It was no more the horrid Continuation School that he must attend, but the school of his *own* special trade, the school of the trade in which his life's work would lie." "It was no longer the cold and intangible abstraction called 'The State' which forced him to go to the school, but he knew and felt a union of his fellows behind him taking an interest in his personal development, and in their ranks he could learn the duties of the individual to the society of which he formed part." The purpose of the new extension of the sphere of education is to

bring into union public and industrial interests. Its author quotes Stein's saying of a century ago, that the surest way to complete the higher education of a people is to encourage each single section to take part in the affairs of the whole community. He goes on to show how the interest of the employers in the new method was secured, even to the extent of arranging that the time for their school work should be found out of the hours of employment. Then he combats the notion that a trade education cannot be so adapted as to provide general culture. It is impossible, he says, to apply unreservedly to the education of the working classes the methods and principles adopted for the education of the learned professions. But he thinks that "one of the most unfortunate weaknesses in our modern educational theories is surely the fact that we have grown accustomed to assume, without further criticism, that the first aim of the school is to provide a so-called 'general' and therefore abstract education. All the ripest and most valuable knowledge that we possess comes to us through our calling, and where vocational training is conceived in a thorough-going spirit, it offers endless opportunities for the extension of our knowledge and of our powers." "A man's strongest emotions are always those connected with his attainment of the practical ends of life, and if we foster such feelings in a pupil we can win his confidence and make him take pride in his work. And when once this is accomplished, we can

make of him not only an efficient hand worker, but a good man and a useful citizen."

I will quote only one other passage from the book. "The first duty in all education is to encourage each individual to realise his own work, and to strengthen his powers by devoting to it all his intelligence and all his might. Vocational education is the door to the education of the man. The modern peasant (depicted by Passow) who could speak Greek, but who on account of his lack of knowledge or his inability, let his farm go to ruin, would make a deplorable impression on us in spite of his acquaintance with Homer or Sophocles. Of course, if the education of a man is to stop at his education for a trade, or if—to express it more correctly —the two are artificially separated, as is usually done nowadays, we shall certainly rear not men but one-sided narrow-minded boors. But the fault in the vocational education of to-day lies in its restriction to pure technique, and in the neglect of the fact that no trade exists sharply separated from everything else. So long as we ignore the thousand visible and invisible links which bind together all trades and all trade interests, we are injuring not only the true education of the man, but also his trade education. These considerations alone must eventually bring us to the demand which we had formulated from the standpoint of the education of humanity, namely, the combination with vacational training of that education which shall make

the individual understand, participate in, and respect the duties of the whole in which he is a unit."

These are not the words of a man who takes a narrow view of education, or desires to degrade it to a means of earning bread and butter. On the contrary Dr. Kerschensteiner's name is associated with the pursuit of lofty ideals in education. He is prominent in his advocacy of high standards even in Germany, where the demand for learning for learning's sake alone is stronger than it has ever been with us. What he is really attempting is to solve a special problem, that of the young worker who has to earn his living from a very early period in life, and who can therefore only get a general education, if it can be given to him at all, along with and through a practical training. The method of Dr. Kerschensteiner is in such a case to enlist the interest of the worker and his employer alike by the development of the industrial capacity and earning power of the former. He accomplishes this development by raising the training to a high level and making use of the passion for excellence which it awakens to inspire the learner with the desire for the knowledge which is wider, and of which his particular study is only the application in a concrete and specialised form. The means is throughout directed by high ends. This is not the conception of a dreamer. The new system is spreading rapidly through Germany, and her industrial competitors are likely to

find very soon that they have to reckon with it. After all, the method is not a new one. It has always been kept in view in our own country in the training of the lawyer and the doctor and the professional classes generally. For it has been steadily realised that their success in life is largely dependent on their having studied the principles of their professions with a view to more than mere success. The most eminent men in these professions are, as a rule, those who have worked with passion at their subjects, and who have succeeded because of the mastery over details which scientific knowledge has given them. At this period it is too late to question the importance to this class of the training in their special subjects which the University alone can give. And if so, why should there be difficulty in applying the analogy of the same standards to the training of the industrial worker. German employers of labour, at all events, appear to be of opinion that they will find advantage from the process. They are bound by the law of the Empire to allow their juvenile workers under the age of 18 the necessary time for attending the Continuation School. According to the system which now prevails in Munich, and which is being extended through Germany, these schools have reciprocally, as one would expect, Boards of Managers consisting of one of the head teachers, a member of the local municipality, and three members of the particular trade.

Take the case of a baker's apprentice. He has to attend during a four years' apprenticeship, from 14 up to 18, for eight to ten hours in all during the week. He is instructed in business correspondence, and the art of writing advertisements. He learns how to order goods and to make out bills and get in debts, as well as how to keep a baker's books. Besides this he is instructed in the trade of baking, including knowledge of the kinds of grain, flour, and other materials used, and the chemical processes on which baking depends. He is made familiar with the various kinds of oven employed and the practical processes are taught to him by an expert baker. He also, concurrently with these practical lessons, studies his rights and obligations as a citizen. The employers find that all this tends to make him a workman of a superior class, and they support the system in consequence.

The case of the young baker is only one illustration of a growing class of trades to which the Continuation School organisation in its new form is being extended. But I shall not attempt to go into further detail. It is better to leave it to the reader to follow the explanation by Dr. Kerschensteiner himself of the system as it now exists and works in Germany in the pages to which, in its English form, I have ventured to write these words of introduction.

HALDANE.

THE SCHOOLS AND THE NATION

CHAPTER I

THE PROBLEM OF NATIONAL EDUCATION [1]

ALL modern States are suffering from one and the same disease—the unsolved problem of national education. I am not referring here to the education of the *individual* as such; for though it is true that much of the energy previously devoted to this task has been relaxed in modern times, yet new forces have also been released which work towards the same end. I am rather thinking of the education of the members of a community considered as a *social group*; for this is a question which has not been taken up as in the other case from motives partly philanthropic or religious, but has been forced upon the modern State by new conditions.

It has risen out of the political, economic and social revolution which was witnessed during the last century. It has been forced upon us by the necessity of creating

[1] First published in the "Internationale Wochenschrift für Wissenschaft, Kunst und Technik," March 21, 1908.

new organs for the preservation of *social unity* under conditions of life that have completely changed. The old forms and formulæ of education are no longer sufficient. All those conquests which we moderns value most highly—freedom of inquiry, freedom of speech, freedom of the Press, the right to form associations and to hold meetings, a free and universal suffrage, and that economic freedom which is fraught with such far-reaching industrial consequences—all these things have served chiefly to foster Individualism while they have worked against social unity and against a common development of the masses of the people.

In other words, from the point of view of the State their effect has been in the direction of disintegration rather than in that of conservation. And this effect is seen especially where the masses have not been held together by some other strong bond of unity, such as a common language inherited through the ages with the treasures of civilisation which it preserves, a common religious faith, common economic interests, or a danger from without threatening all alike. Moreover, even these bonds do not always prove sufficient to resist the individualistic forces which lie in those advances of the modern State already referred to, and which bring into prominence the demand of democracy that the masses shall have a share in the government. Then, too, there are the disintegrating influences bound up with the right of the workers to combine in unions, and with the similar right of employers to form syndicates and cartells. All such combinations can only serve to bring together the members of a single social class; and even if under favourable circumstances a spirit of solidarity is evoked within the class in question,

yet that spirit is so intimately connected with particular economic interests, as opposed to the advancement of civilisation in general, that the result is an accentuation of the antagonism between the different sections of the community. If then, we may say, it is just those benefits which we value most in the modern State that tend to break up its unity, by dividing the masses into industrial groups and political parties whose struggles ever and anon rouse the body politic into a frenzy of unrest, we must apparently be prepared to curtail some or all of these liberties in order to ensure the virile integrity of a great civilised power:—as does, for example, the Catholic Church. The alternative is to acquiesce in the destruction of historic constitutions in whose place new social units will be formed perhaps better suited to the homogeneous needs of given sections of the people:—as, for instance, in the case of the amicable separation effected by Norway and Sweden.

We must for a moment examine both of these proposals, for as a party programme each has a number of supporters in every modern State. At this point we will neglect the fact that in modern times the first course is completely closed to a large part, perhaps to the majority of mankind, to all in fact who value these individual liberties as the highest good in life, whether they see their ultimate significance or not. Taken in itself this course is by no means necessarily to be rejected; indeed, it corresponds closely with the ideal of Plato's Republic, where the philosophers are lords and rulers. By philosophers, however, Plato does not mean a body of monkish intellectuals, but real men who, through a long, varied training in the school of

life, have attained to the highest wisdom. The rest of the community who are engaged in trade have merely to obey them. Of course, if there were a natural, self-regulating system of selection which always automatically separated out the most capable and efficient in matters moral and spiritual from the great mass of their fellows, then no one, however enamoured of liberty, could conceive of a better state. For we value the advantages of liberty because we hope that, in spite of all obstacles, they will in the ordinary course of development create some such selective system as will suit our purposes, and that its own needs will force the State to develop machinery which will ensure its continued existence.

It is human nature, however, which so unkindly destroys the Platonic scheme, for mankind knows no such royal road to peace and happiness. If only history gave us grounds for believing that the exclusion of the great mass of the people partially or permanently from the blessings of liberty would improve the position of each individual, then I cannot see what would prevent the greatest thinkers from demanding this exclusion and patiently working towards it: this, indeed, would be their manifest duty. But the lesson of all the centuries is very different. It is an historical fact that all such attempts at exclusion, whether the result of human wit or of the thirst for power, have eventually led either to disastrous explosions or to stagnation, retrogression, and the complete ruin of the States that indulged in the rash experiment.

The second way, too, endangers the permanence and development of the advantages which mankind has

won: for generally it leads, even if as a rule only temporarily, to narrow-minded measures and consequently to retrogression. The great modern States resemble accumulators for energy of every sort—scientific, moral, physical, technical, financial, and economic. With the retrogression of such States this energy is dissipated: and with a narrow-minded policy their power for good work becomes feebler and poorer—as when a large amount of working capital is broken up its productive power is diminished. To take a concrete instance to illustrate the truth of this, we need only compare the Germany of the year 1800 with the Germany of the year 1900. Then again one must regard the separation of the United States from England in the eighteenth century as a progressive step, because that separation gave us two great civilised States instead of one. On the other hand, no sensible man could now wish to see a further disintegration of the great British Empire so long as the mother country itself is so active in the cause of freedom and progress. When Mr. Joseph Chamberlain was endeavouring with all the means in his power to strengthen the bonds of unity in the great Colonial Empire I was glad to find many Germans who were able to admire the man for his far-sighted policy although they knew that the realisation of his ideas would by no means result favourably for the economical development of Germany. When men are united for common ideals and feel themselves to be united at heart, then they feel the slightest disintegration of their unity as a diminution of their strength, and they resist it by every means they know. Now the modern State is just such a community united for common

ideals of progress, and the more seriously it keeps in view the ends which it has set before itself, the more it is conscious of its duty to be sufficiently equipped in the peaceful struggle with the individuals of other States. Otherwise the various sections of a people run the danger of losing, in consequence of the decline of their State, precisely those advantages which they aimed to gain by means of their policy of disintegration. In the interests of progress, then, a large number of small States is not an ideal: what we need is rather a limited number of large and powerful States, not erring in the direction of over centralisation of course, and under their influence a few quite small State offshoots may exist side by side, like the underwood which finds shade and protection beneath the giant oaks. It is only large States which can develop and encourage that social, economic, intellectual, and artistic energy which allow the unavoidable struggle of class and race to result in a peaceful victory for all those ideals of a higher civilisation on which mankind sets the chief value. Only in a great State, too, is the man of action ensured of a field which gives sufficient scope to his valuable activities, and because with some men the working out of their projects is their very life, it is in the greatest States that the greatest power will be developed in those who are most gifted for practical work in the interest of mankind. The scientist can develop his talents to the full within the four walls of his study or of his laboratory, and through the art of the printer he can make his influence felt in the world around him—although in many branches of knowledge the assistance of a wealthy State may be of immense importance for the full development of his mental

powers. But the organiser, the administrator, the industrial *entrepreneur*, or the great educator are only too frequently overcome by insurmountable difficulties in small surroundings: for in small States bounded by their smaller horizon their services are often lost to the cause of progress long before their creative genius has been exhausted. If, to use the phrase which Alfred Krupp has inscribed under a picture of his original factory, the object of labour should be the good of all, then the greatest productive forces have the best chance of achieving really valuable results in communities organised on the largest possible scale.

We see, then, that neither of the courses which certain parties recommend or follow leads to or even advances culture in general. Consequently the only alternative for the modern State is to try to develop other forces so as to oppose the disintegrating effects of the benefits of liberty. One of the best means to this end lies in the Education of the People.

The only person capable of undertaking this experiment is he who believes in the possibility of such an education of the masses, that is, in the possibility of developing in the masses by means of public institutions a definite force in the cause of progress. He who does not believe in this can only turn to one other means in the modern State: that of opposing to an increasing extent the misuse of liberty by setting up police regulations or special prohibitive laws with the object of conserving the State. But the more one adopts this method so much the more does one in reality stray from the right track—if the maxim is true which declares that the ideal end or aim is a human society consisting as far as possible of independent

morally free persons who have developed according to their individual capacities. Neither police regulations nor prohibitive laws make for independence or moral freedom. Let us, then, who believe in the formation of a real social community through the education of its individual members, concern ourselves with two points: *firstly*, the fact, so evident all around us, that the advantages of freedom in the modern State work less in the direction of disintegration as the culture of the people reaches a higher standard. The parliamentary constitution which is such a blessing for England would be a misfortune for modern Russia. The State which has reached its adult development may be exposed to the free winds of heaven, not so the State in its infancy. And *secondly*, that mankind is not actuated solely by the selfish forces of liberty which drive individuals apart, but also by social forces which are at work to re-unite them. Otherwise large, comparatively permanent, and spontaneous State organisations could never have come into existence at all. The first of these considerations gives us hope for the possibilities of education, and the second shows us the way. The formation of a powerful energetic social spirit, which shall not fail in critical times, is only a gigantic extension of the same spirit which is found in the family. One cannot say that the possibility of a strong family education has grown as compared with former times. On the contrary it has diminished chiefly through unfavourable economic and social conditions. But it existed and still exists to-day, as for example in the case of certain sectarian minorities, sometimes even to an extent which goes far beyond the narrower circle of the family. What is the secret of this education? None other than

that the intellectual, moral, technical, and economic development of the young generation attains its full extent in and through *practical service within the family* whether in the wider or narrower sense. According to the age which the children have reached they take an active part individually or together in all the activities of the family; helping, serving, acquiescing and advising. Thus their own experience rather than the teaching of the grown-ups gives them a sense of the value of a strong family feeling in the common life of the family. This feeling is indeed often present in practice before its usefulness and necessity can be conceived in theory.

This, then, is the path to be followed in the training of a strong social spirit. Two means lie at our disposal: one, preparatory, through the school, the other, completing the work, through the manifold organisations and institutions of public life. Above everything, of whatever kind the schools may be, they must arrange to a much greater degree than formerly for a training in the social, or communal, side of man's nature. To this end, in the same way as in the family, educational arrangements on the intellectual, technical, and artistic sides must not be such as to lead the characters, or natural gifts of the young, to become self-centred, as happens when education is carried on by means of isolated occupations for the individual; but if possible it must keep in view the service of others or at any rate joint work with others.

This is a demand seldom made hitherto and will perhaps still seem to a large number of authorities very questionable. What I am saying here, and what I have been trying to carry out for the last fifteen years

with more or less success in the schools for which I am responsible, I found to my great joy and astonishment postulated some years ago to an even greater extent by the distinguished American philosopher John Dewey in his lectures "The School and Society." At the end of the first lecture, "The School and Social Progress," he makes the following demand:—

"To make each one of our schools an embryonic community life, active with types of occupation that reflect the life of the larger society, and permeated throughout with the spirit of art, history, and science. When the school introduces and trains each child of society into membership, saturating him with the spirit of service, and providing him with the instruments of effective self-direction, we shall have the *deepest and best guarantee of a larger society*, which is worthy, lovely, and harmonious." (3rd. ed. p. 44.)

Truly, nobody could have expressed himself more hopefully than this great scholar as to the effect of a school organised on such a basis.

What our modern schools are doing, however, is almost the opposite of what the above observations show us they should do in order to advance the education of the people. This is an indictment which will not be accepted without proof. One must in any case admit that as the schools are organised to-day, according to the syllabus and the way in which instruction is given, their chief duty is considered to be development of the knowledge, intelligence, and ability, whether technical or artistic, of the individual. In the elementary schools the time allowed and the stage of the child's development only permit of a superficial preparation of the individual for acquiring

skill in the use of the primitive instruments of reading, writing, arithmetic, and, in the most favourable cases, for a very small measure of mental discipline. Our educational establishments, however, which prepare for the higher learned and technical professions, take into consideration almost exclusively an education in intellectual activity and pay little or no attention to that which would lead to communal capabilities. They develop rather mental than moral and industrial alertness, rather technical superiority over others than responsibility for, and devotion to the service of, others: in short, they are schools where the selfish desire for knowledge, and not—or hardly at all—the social nature, undergoes a systematic development. "The duty of our higher schools," said one of their teachers in Munich, amidst the applause of his colleagues, "is above all teaching and instruction, the question of education is only a subsidiary one." And this is the general spirit of the schools, not alone in Germany, notwithstanding that the regulations strongly emphasise the "education of religious and moral capacities," and that an attempt to further it is made by moral, religious, and citizenship instruction, intended to appeal to the eyes, ears, or feelings of the class. It is therefore the intellectual or technical abilities to which they chiefly turn in practical work with the help of books or reading and writing work. In this way the most talented, industrious, and mentally agile, the most skilled in technical matters are helped in their purely individual efforts to acquire ability, to surpass the others, to make progress, to become conquerors of their fellows, not only on the school bench, but also outside in the battle of life.

The school has told the pupils perhaps a hundred times that one day they must devote their energy to the service of their country, and has shown them in history lessons examples of true heroes in deed. But the boys and girls have not really learnt this, they have not found it out from their own experience. The modern school is not constituted or directed so as to make the social forces co-operative through suitable work. On the contrary, it does not allow of co-operative work, for it desires to further the efforts of the individual not of the mass. If, nevertheless, we see thousands of our fellow-citizens permeated not merely with a platonic but also with a genuine practical spirit of social service, we have to thank primarily *not the schools but family circumstances* or other favourable conditions which interest the growing generation by precept and practice in the service of their fellow men. For otherwise we Germans, with our highly developed school system, which is certainly superior to that of all other countries, should as a people have a most conscious compact sense of social solidarity—a claim which I feel we cannot make. I have said that we have not to thank the schools primarily, though naturally a well-ordered school system with its strict circle of duties, its education in conscientiousness, carefulness, and accuracy, in the common subservience to common laws without regard to persons, is not without influence on the development of the community. But these practical results have only arisen from the modern school system because a well-ordered school is unthinkable without them. Our schools make no systematic provision for fostering the higher social virtues,—above all that sense of duty to the

community, which is of such immense importance, and the feeling of responsibility for every word and every act, the terrible lack of which brings about so much misfortune among our fellow-citizens. In fact, the system of perpetual coddling, leading, and showing the way which rules our schools to-day, directly exclude such provision.

Only in two developments of recent origin can I see a definite intention to further the social virtues: these are the societies for gymnastics, athletic games, and excursions, and the organisations of University students for the education of workmen. The second group, viz., the University organisations, arises directly out of the spirit of communal help, and the first may easily be imbued with this spirit. How little, however, their importance is realised is shown by the passive attitude if not the opposition of those who might help them on. Mistrust of the young, which so dominates our educational system, is here also an enemy of what is good.

In comparison with these two new movements, the introduction of instruction in civics in all schools, which was decided upon by Hamburg in 1907 and is to-day making progress everywhere, marks but a small advance. Instruction in matters of moral import is ineffective everywhere when it is not combined with practical exercise or custom. In this point of exercise and custom the public schools of England and the colleges of Oxford and Cambridge are far in advance of us. We Germans always believe that we can effect all school education by means of explanations, by words or books, through mere lectures and addresses of all kinds. That is certainly the most convenient and the cheapest method

of public education. It is, moreover, not quite fruitless, provided that the seed of the word falls on a mind well prepared by home or other such influences. Where this is not the case, however, the method is of little value. The training of a people demands more. It must *accustom* the boys and girls to direct as far as their nature allows not only their thoughts and feelings but also their actions in all critical positions, towards the service of common interests. But this only takes place through work, through real practical work, whether in a school organisation or in practical life. Only in the practical school of such organisations, which are ever gaining a wider significance, do the social forces develop those powerful habits of will, which in the end are able to outweigh any individualistic instincts. Only in such a school does a human being learn by his own experience to feel the often concealed dependence of his own interests on those of his fellows, and gradually to comprehend them more clearly. Only in such a school does the old maxim of the equality of mankind attain its real ethical significance; and there alone is a right conception developed of that association for mutual aid which we call the State, whose power is fruitful just so long as it can range as many as possible of its members in its service to perform social duties at the cost of their selfish interests. I should like, therefore, to state the problem of popular education in this form: it is *the systematic training and organisation of the people to take pleasure in active constructive work for the common good.* In this formula there lies that egoistic factor, the pleasure of creative work, to rescue which the best of our schools are striving to-day, but unfortunately divorced from all social thought and

feeling, and—except in the case of the special trade schools—almost entirely in the purely intellectual sphere. The use of this egoistic factor is, however, an important point in the solution of the problem, for only the joy of creative work gives that personal meaning to life which is so necessary if our social activities in education are to find a connection with reality. Only such men can be educated as believe life to be worth living. Education uses this motive force in that it associates with it other values whose inclusion in the national consciousness it postulates. This association is achieved when we attempt to make the egoistic joy of creative work a social force by encouraging its realisation through the channel of practical activity. Thus the moral forces are trained from the beginning through continuous direction of the present *passive willingness* into the path of the future *active feeling of duty*. All educational systems which set before the activities of mankind merely an "ought"—that instructive moral precept with its uninteresting command—fail when they have no further means of enforcing their "ought." Thus even to-day in the family the common delight of parents and children in constructive effort is the most effective medium of all domestic education: and in the times when there were few schools, or none at all, the initiation of the boys and girls in the occupations of their parents, in the customs of the larger family, in the rights and duties of the exclusive class, which generally—at least in the case of knights and burghers—had its own well-defined organisation, was a growth and development of the pleasure of common productive work. From this soil arose those steady, unshakable, honest men of

might, who, however much they were otherwise at enmity, united together in moments of common danger like the grapplers of a crane that is ready to raise its burden. This factor especially was fundamental in all education in the prime of the German towns, when the developing guild organisations constituted both elementary and higher schools for introducing the new generation not only to the practical work of their trade, but also to the administrative work of local government. At the beginning of the ninteeenth century, when Germany lay in the dust, the principle in question was fully recognised by philosophers and statesmen as the fundamental principle of the education of the people. Thus we find Baron von Stein writing: "So long as the constitution is not changed, so long as the forces of the people are not urged on to greater self-activity through communal and State institutions, so long as the majority are obliged to occupy themselves with only selfish and egoistic interests, egoism will prevail and little that is great and inspiring will be achieved. The nation must become accustomed to look after its own affairs. A social spirit is only formed through direct participation in public life. Let it arise from affection for the social group of which one is a member, and grow through love for one's country." The educational institutions outlined by the philosopher Johann Gottlieb Fichte[1] for the raising anew of the people are quite in the spirit which we associate to-day with the name of John Dewey: and which aim at

[1] Fichte, in his "Fourteen Addresses to the German Nation." This is not the only work of Fichte which is worth the reader's attention, and I would most earnestly recommend the study of everything which the philosopher wrote on national education as well as certain of his other writings.

realising an "Embryonic Community Life." Fichte urged the establishment of institutions in which knowledge and work is combined, which essentially support themselves through the work of the pupils and make each conscious that according to his ability he must help towards their maintenance: institutions "in which everyone must know that his share of work is a debt owing to the whole," in which everyone must share his joys or sorrows with the rest according to the destiny of the whole. "Thus the independence of the State and the family into which he must one day enter, and the relation of their separate members, live before his eyes and root themselves indelibly in his mind."

The whole question is: How is this organisation to be carried out in face of the present condition of our schools? The institutions of Fichte can only be realised on a very small scale if at all. The original plan of the schools founded by Dr. Lietz in Thuringia was inspired by this spirit, but the organisation of our school system as a whole did not allow his establishments to develop in this direction. The brilliant attempt of John Dewey at the University of Chicago cannot look for any great extension by reason of its cost alone: any plan for an organisation in which, as in this case, the cost per child amounts to £25 yearly, will at the best only be greeted with a shaking of the head. After a short existence of hardly six years, this experimental school was dissolved. We must begin far more modestly, as true reformers, keeping at each step the far off goal in our minds. Once we begin seriously to work in the direction of the distant goal, our children can continue the work from the point where we ourselves are obliged to leave off.

One thing though is certain: pleasure in work will only grow where the work we have to do satisfies our capabilities, inclinations, and temperaments; perhaps even the expectations we form of life itself. This applies to the child with its untrammeled egotism even more than to the adult. The life of at least ninety per cent. of all elementary school children does not lie in the sphere of that book-work which our schools enforce. Not only the whole environment in which they develop, not only the future into which they will grow, but also the natural temperaments and inclinations of most children have a bias in the direction of practical work. If one tries the experiment of giving a boy well instructed in theoretical matters the choice between school books and exercise books on the one hand, and plane, saw, and chisel on the other; between demonstrations in the physical or chemical lecture rooms and the hours of practical work with balance and retort in the laboratory; or if a well-conducted class of girls is allowed to decide whether they prefer lectures in botany and food-stuffs or a practical hour in the school garden or kitchen—then certainly ninety per cent. of all the children will want to get away from the school-rooms with their atmosphere of passivity to do something active and practical. One need only see and experience the inner tumult of the children and the glow of excitement the moment the usual book lessons of our elementary school in Munich are over and the doors of the work-rooms are opened, to need no further proof.

Nevertheless in Germany our elementary schools are still, in spite of repeated attempts to introduce practical work, purely book schools. In order to deprive

them little by little of this character it is not sufficient to add here and there instruction in manual occupations, to open here and there kitchens and school gardens. We must introduce practical work in an organised way into the curriculum as a whole, we must endeavour more and more to put the workrooms, laboratories, drawing-halls, kitchen and gardens in the midst of the activities of the school, and as far as practicable to link them up with the theoretical instruction.

This is especially necessary in the instruction in the continuation schools which—almost without exception —anxiously close themselves to the introduction of practical work even to-day. I hear the objection: Why?—The fourteen to eighteen year old boys are already engaged in practical work all day as it is. Certainly, but in what kind of work? In by far the greater number of cases in work which is very unlikely to arouse pleasure for its own sake. For the social, economic and industrial conditions, and not least the low standard of education amongst the masters, rob most apprenticeships of the essentials for the development of a spirit of joy in labour. Not all work brings pleasure with it. Such pleasure only arises from thorough, honest work, that has been thought out from every side, systematically advancing with the worker's powers, and his slowly developing practical instincts. What apprentice conditions to-day continue to offer this? Think of the innumerable boys and girls who meander through three or four years of purely mechanical, uninspiring, or even detested work, who from the first are taught in a one-sided way, or put continually to poor work, or to patching and repairs. Or think of those multitudes of our youths who from the

first day of leaving the elementary school are engaged on casual jobs: does anyone really believe that, when at the age of eighteen they enter on their lives as citizens, they have been filled with any personal, to say nothing of any common, joy in work? According to my estimate, out of 1½ million boys of the ages in question in our country one-fifth do not make the acquaintance of properly trained labour at all; they spend the golden years of their lives as casual labourers, messengers, errand boys, hawkers, etc. How are these poor fellows to obtain any understanding of civics, of a common joy in work, who have never themselves experienced any pleasure in labour? They sit inactive at the memory- and writing-lessons of the usual continuation schools; they let the verbal teaching go by without sharing it; they cannot take part in the activities of their fellow citizens, unless apostles come to them from the land of the future and point out where the milk and honey flow for ever.

It is obvious that what is most necessary, and what we must do here, is to create schools in which every one may learn for himself the blessings of earnest work. It was for this reason that I have sought to combine workshops with all continuation schools, even with such as only included young people who would later go into unskilled professions. If only people one day come to realise what it means to help the young through the joy of practical work; if they would only understand that nobody can be properly educated without knowing what it is to labour for himself; that all intellectual and moral teaching only has its effect on those filled with the joy of work, then perhaps we shall get State measure laying down that *every boy and every*

girl before ending the eighteenth year of life shall have learned some vocation, unless they are engaged in higher studies. There is no need to fear that through the adoption of this plan in the elementary and continuation schools, the cultivation of the old instrument the three R's will not receive its full share of attention. On the contrary, if we place them in the service of practical work they will be used by the masses with greater certainty and satisfaction than when they are divorced, as they are to-day, from the natural inclinations of most of the pupils, and only practised so long as school compulsion makes this unavoidable. Any work which really grips our boys and girls will make them seek of their own accord methods which will help on this work, and with regard to our libraries our most urgent care will be to equip them so as to serve the end that we have in view.

We see then that the first step that our school organisations have to undertake is *to change our book schools into schools of practical work* by substituting in all cases where the subject taught allows, a method based on practical work for the present method based on books. That this step can be taken without too great an expenditure is shown by the organisation of the upper classes of the elementary schools and the whole of the continuation system in Munich.[1]

But a second step must follow on the first: the love of work must be directed from personal into altruistic channels, and, as regards school organisation, our schools must become, as it were, *work communities.* There are—especially when education is animated by the spirit of confidence in the young, rather than by mistrust—

[1] See especially Chapter VI and Appendix I.

several possibilities which I have examined closely, particularly in my book "Education for Citizenship."[1]

Once a communal joy of work is awakened in the schools; once the primarily egoistic will to work has been diverted into the service of the community; once the spirit of submission, of responsibility, of readiness to help has arisen, then we must take the third step, which is *to change the virtues acquired by habit to the virtues to be acquired through insight into the meaning of "citizen of the State."*

The manner in which this instruction is to be taken in hand, the way in which it must fit into the school system depends on the object and purpose of the school. The elementary school, however, must, on account of the age of the children, do without this instruction.[2] On the other hand, as I have stated more than once, many possibilities offer themselves of carrying it out in continuation and special trade schools of every sort, in all higher schools, and not least in that school which is common to all citizens of the German Empire, the school of Military Service, which is by no means sufficiently utilised as a training ground for civic education.

The fourth and last step is, finally, the introduction of the citizen to the administration of civic affairs, as much through the various organs of local government as through chambers of commerce and agriculture, associations of hand-workers, and so forth; above all through the formation and extension of every sort of public authority concerned with schools, education,

[1] (English translation, Harrap and Co., London.) Compare Chapters V. and VII. of the present work.

[2] See also Chapter IV.

and social welfare. The modern constitutional State has, I admit, taken this last step long ago, but taken it without the three previous steps. This accounts for the comparatively small influence of these institutions on the further education of character, in its social aspects, and the constant recrudescence of party and other interests as we see them in Parliament. The natural consequence is, that these subordinated administrative and social authorities have but feeble powers of resisting the natural and constant desire of the powerful central authority to limit step by step the autonomy which it has conceded, rather than to increase it as the citizens become ripe for further concessions.

These maladies will certainly never all disappear: but matters would be considerably improved if the State in all its enactments would keep the final object of all education more clearly in mind, namely the future citizen; and if it would understand that in its school organisations the first three steps are all-important. Even to-day it is not inclined to make the necessary sacrifices, but perhaps the disintegrating forces will cause a change before it is too late.

Throughout the civilised world, and especially in German and Anglo-Saxon countries, the demand is being heard for a clear lead in this matter. Compared with the importance of the fundamental question: "Can the schools of all kinds be placed in the service of the social education of a people?"—all the other topics now discussed in Germany, England and America, the questions of monopoly and right of examination, humanism *versus* realism, the value of Latin and Greek as against natural science and mathematics,

English and French—all these pale into insignificance. For me this sort of question has long been settled. The educational value of every scientific occupation depends above all on the talent of the individual for this occupation. If the talent for a particular scientific or higher technical profession is really present, then by a thorough training of his talent a boy may secure all that any form of education has to offer. The chief point remains, that our curriculum should not be, as hitherto, crowded with every possible kind of subject to each of which every pupil must apply himself, without regard to his particular talents. It would be far better if the teachers of the higher schools would occupy themselves with the question: How can we secure by the instruction we give that work shall be undertaken with pleasure? They would then discover for themselves the above solutions, and considerably increase the educational possibilities of their schools.

Whether the State would really return to health if all schools took the path here pointed out, and whether State and Community would make it their business to bring the people together after the school has done its work, in organisations with an independent sphere of influence in the service of a greater community, cannot be prophesied with any certainty. It will to a great extent depend on how soon the duty is taken seriously, and what material means remain available when so many other tasks of defence and social welfare have to be attended to. It will depend too on how thoroughly they enter upon the work, and above all, on the training and the spirit with which they are able to equip the vehicles of educational influence—teachers and inspectors. Moreover school

education can only lay the foundations of the work: conditions of internal and external policy, to say nothing of social and economic conditions (for instance the housing problem), may stand in the way to a considerable extent, and hinder its necessary continuation outside and after the school.

One thing in any case is certain: every step, even the smallest, in the direction which I have indicated will always bring a group of men nearer together than before: will teach them to serve, help, make sacrifices, and how to transform "equality" into the acceptance of higher and lower in social organisation; and thousands of steps will do the same for a thousand groups. Similarly we can hold fast to another principle: every step, even the smallest, in the direction indicated makes for a truer and a higher form of education, and emphasises the importance of character training as contrasted with the mere teaching of earlier times.

It brings experience to each individual of his own work, which has its effect on the character—not mere knowledge derived from books, which at best can only increase his store of information. Thus there is not the least risk in leaving the paths we have hitherto followed and striking out in new directions. Rather it is possible thus to reap the greatest gain that could be in any way attained: the realisation of a stable and self-contained community in full possession of all that is noblest and best in life. Admittedly not for all time: individual States have arisen and passed away like all other organisations, and there is little chance that the modern State will enter on an eternal life. Indeed at the international congress of sociologists in London in 1906 the sociologist, J. K. Kochanowski, in a paper

called "La foule et ses meneurs" argued very persuasively that the life of a State is just as necessarily a finite one as that of the individual. It may be so—but then there must also be a possible longevity for States just as there is for individuals: in fact our definition will run as follows:—"A State can exist just so long as it can confidently, conscientiously, and earnestly, educate its members in accordance with the principles of a practical social idealism."

CHAPTER II

VOCATIONAL OR "GENERAL" EDUCATION?[1]

PROFESSOR PAULSEN tells us, in his excellent work on the History of Higher Education, that Franz Passow, who through Goethe's influence was appointed Professor in Weimar, and later became Professor at the University of Breslau, at the beginning of last century demanded in all seriousness that in the interests of Education every German whether labourer or prince should learn Greek. I was reminded in reading this of the suggestion of Maupertuis, who was president of the Berlin Academy about the middle of the eighteenth century, that a town should be founded in Germany where Latin, and Latin alone, should be spoken by young and old, high and low. We who have made such great strides in educational theory, and to whom Pestalozzi has since preached the gospel of self-activity in education—we laugh at this quaint conceit. But a century hence our descendants will laugh too when they learn from the historians of the twentieth century how our modern followers of Herbart endeavoured to develop in their immature pupils in the elementary schools a complete and compact system of ideas, and to produce in them a many-sided interest to

[1] First published in "Pädagogischen Reform," 1904, No. 1.

be directed alike to all things and to all aspects of those things. They will laugh when they read of the innumerable followers of Pestalozzi who, although they profess to revere his name, as do the Mahomedans the name of their prophet, yet carry on education on so-called "graphic" lines, with pictures of every kind, within the four bare walls of the schoolroom, and make their pupils even before they can speak correctly perform year in year out the most amazing grammatical gymnastics. Passow and Maupertuis had at least the very weighty argument in their favour that they wanted to raise their pupils to the highest standard of the classical educationists *in one single subject*, and no doubt they were strongly convinced that the beauty of these old languages and the richness of thought latent in them, would be mirrored in the beauty and force of the citizen they would produce. It could also be urged in their favour that in their times the wide field of educational method was by no means so extensively cultivated as it is to-day. But we modern Pharisees who can plead no such excuse have for this one instrument of mental gymnastics substituted perhaps a dozen—if we included the higher schools more than a score. Over a century and a half has passed since then, and as in the meantime the subject matter of education has changed, so, too, has our ideal of an all-round education changed: at any rate as far as the average man is concerned. I still know of no higher school which does not insist on the teaching of two modern languages in addition to the mother tongue, and often also two ancient languages; which does not earnestly endeavour to stuff the head of every child with the history of its own country and of the

world, with political, physical and mathematical geography, with zoology, botany, mineralogy, geology, chemistry, physics, algebra, geometry, stereometry, trigonometry, religion and religious history: and there are many schools which extend even this programme.[1] The "Educated Man" must be at home with the details of every branch of learning which human knowledge has accumulated in the course of sixteen centuries, and this is expected not of the older and mature man who has learned his lesson in the hard school of life, but of the school-boy in knickerbockers. Only the young man who is versed in everything, and whose memory answers to every question as the electric bell to the touch of its button, can obtain the "certificate of maturity." One is almost inclined to think that the Chinese managed matters better—if it be true that their final examination for mandarins is not open to candidates under seventy, for then certainly the young man has time enough to complete his education.

In the meantime our elementary schools have become replicas on a small scale of the higher schools, and although we are all distressed about this over-dose of learning, new subjects are ever knocking at the doors of these schools too: worse still, the doors have been opened to them and they are looking round for a place where they can settle near their comrades and then spread themselves out.[2] Very few people in

[1] Consult the syllabus of the Higher Commercial Schools or the Secondary Schools of Switzerland.

[2] I was horrified to hear recently of a movement amongst the teachers in favour of the inclusion of one foreign language in the curriculum of the primary schools, without regard for the needs of any given locality.

Germany have a clear notion of the results of our educational work which has caused so much trouble and anxiety to so many of our devoted teachers. But we realise it in Bavaria, where after a compulsory attendance at a week-day school for seven years the pupil is required to attend every Sunday for two-and-a-half-hours, during a period of three years, at a special school; and where an obligatory leaving examination is required from this Sunday school besides that from the ordinary school.

The result as regards the information imparted is positively amazing.

The veneer of knowledge so artistically applied to the thirteen year old children leaves them at the final examination three years later like highly polished but empty vessels. The veneer was not the right one and three years of practical life have sufficed to rub it off. Seventeen years ago when I saw for the first time the striking contrast between the results of the two schools, when I saw how the teachers beheld with sorrow the disappearing fruits of their life's work, I realised that our elementary school syllabus, based on the system of giving the most general culture, or rather the most ample range of knowledge, was but as the work of Danaids: and I firmly resolved to do my best to effect a reform in my own small sphere. How difficult this is can be related by the hundreds who, filled with the same convictions, try to take the same course, and who remember that the greatest and most serious minds of all times and nations have long since indicated the right path of education but have not shown us how to follow it. It is so much the more difficult in that we have

all grown up and been trained in this same tradition and must first break free from many long-cherished prejudices: and because the realisation of common sense educational methods in our own modern State, with its vast and multifarious duties, must for a long time be hindered through the restriction of means.

What has brought us on to the lines we are following to-day? We may say that it is the best intentions, the sincerest desires, and on the whole a right idea; the idea that the happiness and welfare of the individual, as of the nation, consists in the cultivation in the highest degree possible of the intellectual and moral qualities and technical abilities. But who is cultured? The question itself divides us. It need hardly be mentioned here that learning alone must not be confused with culture, and Paulsen has pointed out how, for example, the simple farmer Hawermann in "Ut mine Stromtid" certainly conveys the impression of being a cultured man in contrast with the sons and daughters of the chamberlain. Indeed the following paradoxical definition, which I read somewhere or other, is not far from the root of the matter:—"Culture is that form of the soul which would remain were its owner to forget the learning which gave his soul its form." Education, in fact, is nothing more than a fashioning from within. The aim of the fashioning is the "complete" human being as he is imagined by different peoples in changing epochs.

It is well known that the Greeks in their *ἄνθρωπος καλὸς καὶ ἀγαθός* had conceived such a being. We are carried a step further forward, however, when we learn what they really meant. Leopold Schmidt gives an example in his "Ethik der alten Griechen" (Ethics of

the Ancient Greeks). In his "Economicus," Xenophon causes Socrates to seek out a certain Ischomachos, a man regarded by general consent as fulfilling this ideal. He finds a prosperous husbandman who keeps his household scrupulously in order, treats his wife and his slaves kindly and judiciously, most wisely bestows his goods for religious, civic, and humane purposes, uses his daily life unremittingly in fitting himself for his duties as a warrior and a citizen, and further pays especial attention to keeping himself in health by means of equestrian and other exercises.

In the same way as the Greeks found in their "Kaloskagathos" a name for the type of a cultured and "complete" man, so in England we find the word gentleman used to denote the same idea. Perhaps Huxley, who was a member of the Royal Commission for the Advancement of Scientific Education, has best explained what we have to understand by the word. Speaking in 1868 to a concourse of workmen, he said: "That man, I think, has a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that as a mechanism it is capable of: whose intellect is a clear, cold, logical engine with all its parts of equal strength and in smooth working order, ready like a steam engine to be turned to any kind of work and spin the gossamers as well as forge the anchors of the mind: whose mind is stored with a knowledge of the great and fundamental truths of nature and of the laws of her operations; one who, no stunted athletic, is full of life and fire, but whose passions are trained to come to heel by a rigorous will, the servant of a tender conscience; who has learned to love all beauty, whether

of nature or art, to hate all vileness, and to respect others as himself."

It is obvious that there is something common to both these views of the truly cultured man, in spite of all the differences in their enunciation; the Greek, however, takes much for granted which the Englishman sharply defines.

Where they differ, or appear to do so—apart from the affluence mentioned in the "Economicus," and also generally understood (though not for Huxley) in the English conception of the word gentleman—is in the relation of culture to one's country, to one's fellow-countrymen and their institutions. Perhaps, in the case of the Englishman, this relation is so much a matter of fact that he finds it unnecessary to mention it in his definition of a "liberal education." Be that as it may, Huxley considers only mankind as such in his educational ideal, the same ideal as that set up by Schiller in his letters on æsthetic education and also adopted by Kant and Goethe. The educational ideal of Xenophon is, however, not humanity as such, but the Greek who lives his whole intellectual, moral, and physical life in the atmosphere of his race and his vocation. This seems to me to be the crucial point of the whole question, on which, before all others, we must be united if the countless capable and intelligent men who are struggling with educational questions are to agree.

The conception of a complete man is an abstraction formed from the ideas of a people and an epoch. All relations which exist, or should exist, between the individual and the community, and between him and the creeds and opinions of the nation to which he

belongs, are woven into this mental picture. There are certainly many treasures of knowledge and art, of morals and of religion, which belong in common to many civilised communities; many of these will remain the permanent possession of all mankind for all time. One can thus say that individual men, in so far as they are savants, artists, philosophers, or theologians will have international importance according to their form and value. But in their capacity as human beings they are of their own time and of their own people; and, however much their especial activities may be acclaimed by the world in general, they only attain their full significance and their real import as members of a people with whom they are bound by a thousand ties. When we consider in their completeness the means which lie at our disposal for the true education of mankind, we find that they lie rooted in the intellectual and moral treasures of the people to whom the individual belongs, and it seems to me impossible to attain with such purely national forces to an education which shall rise above the nation.

If, then, we are agreed that the true man is a national product, not only in idea, but in reality; that his insight, his responsiveness, his firmness, and his self control will be brought out above all his relations with his fellow-countrymen, then it will be possible to find that solution of educational questions which the unnecessary dispute between the advocates of vocational and of general education renders impossible, and which once found can not only direct our joint efforts to one end, but can bring them in harmony along the same path. On the way to the ideal man stands the useful man, he

who realises his own task and the task of his country, and possesses the ability to carry his object through. Only in the degree in which he succeeds in this can a nation appraise him as a man; but in so far as he does succeed, the least of men can, as Goethe says, be complete, so long as he remains within the circle of his abilities.

The first duty in all education is to encourage each individual to realise his own work and to strengthen his powers by devoting to it all his intelligence and all his might. Vocational education is the door to the education of the man. The modern peasant (depicted by Passow) who could speak Greek, but who, on account of his lack of knowledge or his inability, let his farm go to ruin, would make a deplorable impression on us in spite of his acquaintance with Homer and Sophocles. Of course, if the education of a man is to stop at his education for a trade, or if—to express it more correctly —the two are artificially separated, as is usually done nowadays, we shall certainly not rear men but one-sided, narrow-minded boors. But the fault in the vocational education of to-day lies in its restriction to pure technique, and in the neglect of the fact that no trade exists sharply separated from everything else. So long as we ignore the thousand visible and invisible links which bind together all trades and all trade interests, we are injuring not only the true education of the man, but also his trade education. These considerations alone must eventually bring us to the demand which we had formulated from the standpoint of the education of humanity; namely, the combination with vocational training of that education which shall

make the individual understand, participate in, and respect the duties of the whole in which he is but a unit. This part of our problem is not only *connected* with the first; I will go so far as to say that *only through* it can the solution come.

Nobody was more convinced of the correctness of this view than the man whom we Germans regard as the type of a true man and the personified ideal of culture, Goethe. We find this verified in his dramas, his romances, his sayings in prose and verse—everywhere. The most, pregnant of these is in *Wilhelm Meister's Wanderjahre.* Shortly before Wilhelm has decided to enter the educational profession, his old friend, with whom he has been staying several days, lays down certain maxims, which lie at the root of all education: the maxims which we recognise later as a part of the principles in educational science. "Handwork, such as can only be learnt in its own narrow field, must precede all life, all action, all art. To know one thing well, and to practise it, gives more culture than a half-knowledge of a hundred things. In the parts to which I am sending you, all activities have been defined. The pupils are tested at every step; and thus each learns the path which his nature is really desirous of taking, although with uncertainty he may turn now this way, now that. Wise men let the boy find the one which is suitable to him, they shorten the circuitous paths which may all too easily lead him away from his destination." In his sayings in prose Goethe professes the same opinions, for example, where he answers the question as to which method of education he considers best with: "That of the Hydriots," who, as islanders and mariners, take their boys with them to their ships and thus let them

feel their own way into the service which they will afterwards enter.

In *Götz von Berlichingen* Goethe makes Gottfried express his mistrust of an education obtained in a non-practical way in an amusing manner. His little son Carl says that in his father's absence he has learned very much, and the latter enquires: "Well, tell me what." Carl answers (just as we might find in one of our own schools), "Jaxthausen is a village with a castle, situated on the river Jaxt, and has been the heritage of the von Berlichingens for two hundred years." Upon this his father asks, "Do you know the present Herr von Berlichingen?"—and, as the boy looks with an expression of uncertainty and surprise at his father, the latter says to himself, "He has learned so much that he has forgotten his own father." He then asks to whom Jaxthausen belongs, and when the same little formula is repeated, we can only reflect: "This is the way women bring up their children; I knew every pathway, every road and ford before I knew what 'river,' 'village,' and 'castle' meant."

In all these statements, which could easily be multiplied, one recognises beyond question that in Goethe's opinion the only way to true culture lay through practical work, or, rather, through vocational training; and, if we follow Goethe's youth in *Dichtung und Wahrheit*, and see how only those things which he encountered face to face in actual life gave him force and impressions which he could himself adopt, remembering, too, that he came back from his journey in Italy a different man, then we realise, all the more, why he esteemed so highly the influence of practical life in the education of mankind. That which we esteem most highly in the

truly cultured man—his strength of character and his moral determination—can only find its natural development in actual dealings with men. The most valuable and most permanent achievements of humanity spring far less from teaching and bookwork than from practical life and independent constructive work. They may be at first very humble and very simple, but they are the only things which root themselves deeply for all time in our whole being, like some mountain plant established in the clefts of a rock. They alone can shape and mould our natures; they alone can help to the attainment of that ideal of Wilhelm von Humbolt and make peasants and mechanics into *artists*, that is, men who love their craft for its own sake, who better it through their skill and inventiveness, and thus, at the same time, cultivate their own mental powers, ennoble their own characters, and raise the standard of their own enjoyment. The great majority of ideas, however, which are merely stimulated externally have not the least educative effect, unless they find in us some deeper impression which has been left there by practical experience and with which they can amalgamate. We have learnt all this a thousand times in other forms and in other connections, in all ages and in all languages, from great minds and small, from philosophers, poets, statesmen, and educationists. As soon, however, as some rays of light reach the medium of reality, they are transformed like sun-rays by a phosphorescent body so that their old colour and illuminative power can no longer be recognised.

There are numerous grounds which make this comprehensible apart from the false conception of education which we find so widely spread. It is to be explained

by our stereotyped examination systems, which, above all, only look for and bring out one side of education, and then give this one part the hall-mark of the whole; by the insufficient education of our teachers and instructors who are brought up almost more than other people on the system of memorised knowledge; by the lack of public funds which are hardly sufficient even for our present institutions but would certainly have to be doubled were we really to educate the masses instead of merely "breaking them in"; by the "forcing-house" method of mental education in general, brought into existence through the too early termination of school life, and ignorance of the one great secret of all education—how to "waste time wisely"; and last, though not least, by the limited conception of the undertaking, which one was apt to call trade education. The State, the municipalities, and the trade and professional associations, in all their public institutions and private measures, considered merely the technical or mechanical utility of the pupil, and sat quietly by while men were turned into machines.

But, however great these drawbacks, we must try to overcome them, for time and circumstances will force us to it. We have believed, even up to to-day, that we could, and must, be able to make our school knowledge a summarised review of the wisdom of mankind. When, however, our neighbours, of whom we are greatly ahead in the matter of our well-arranged system of educational institutions, begin systematically to tread the path which they have tentatively planned—that of a sensible, moderate, practical education—and thus raise the character and originality of their citizens, then our hour for reflection will be over. But even if there

were no competitors to fear, and all civilised nations were to keep to the present paths of popular education, the day will come when the modern torture chambers of education must be closed. If we picture to ourselves a civilisation twenty thousand years old, even the strongest adherent of the modern Herbartian theory must relinquish the thought that the education of the child must be based on an historical knowledge covering twenty thousand years, in order that it may correspond with the development of humanity itself; even the most zealous philologist and historian must lose the desire to know by heart all its languages and all its history. As long as knowledge was limited there was yet some sense in trying to master it; when it becomes limitless we shall no longer measure a man's education by the amount which he has been able fruitfully to memorise. The generally recognised standard of culture will then be an acquaintance with the laws of nature, of knowledge, and of art, attained by the readiest means at our disposal; and the acquisition, through actual dealings with men, of the power automatically to control, though not oppress, the senses; and the application of this knowledge and power to the service of the human family—for the family, so far as human judgment can divine, will always remain. And those teachers will be considered the best who produce with a minimum of material such a knowledge and will, marked by a maximum output of energy; so that they let the pupil work out his knowledge for himself in the right way, and guide him by judicious short-cuts along the path of discovery and experience, bringing out his productive powers, and letting him lead rather than follow.

It would even to-day be possible, in spite of all difficulties arising from modern conditions, to show in our elementary schools the way to education through productive work. To a certain extent we do it, but not systematically enough, and not in every place where it would be possible.

We should first of all have to reconcile ourselves to the idea of not paying the same attention to all the matter included in a wide field of learning, even with a corresponding choice of subjects. A boy or girl who has worked with careful observation and with a thoroughness suited to his or her age through any *one* period of history, any one geographical division, or any one class of animals or plants, gains not only the power, but also the unconquerable desire, to investigate other periods, other geographical divisions, and other classes of animals or plants, and will do it if in later life the circumstances make it necessary. To obtain acquaintance with general laws it is sufficient to deal thoroughly with a small division, and this is far more fruitful than traversing the whole wide field. For the few great laws on the knowledge of which real education depends are the same for all the sections of a large but finite subject. He who wishes to know the Italian people and their ancient art will do better to make a stay in Florence or its neighbourhood than to take part in an organised gallop through the whole country. In the second place it would be necessary, and, after we have satisfied the first demand, possible, to arrange for careful and comprehensive observations in all branches of knowledge, at first by examining various phenomena outside the school and then more systematically by establishing laboratories, workshops,

gardens, aquaria, terraria, and aviaries in the school itself. Even in the majority of the schools of the largest towns it should be made possible to carry out unbroken observations throughout the whole school year:—estimating, measuring, weighing in all lessons in mathematics and physics, the production of maps, profiles and reliefs, planting and cultivation, modelling and carving in connection with the theoretical teaching, simple physical experiments—all these carried out by the pupils themselves. We have in Munich already in all schools, excepting the older ones in the centre of the town, simple but most valuable arrangements for observations and experiments in sunnily-situated school gardens: in many we also find terraria and aquaria with running water, aviaries and butterfly vivaria. Workshops for wood and metal work and school kitchens are now distributed among the school buildings of the whole town. After a hard fight with old-fashioned views there have also been erected in every building small physical and chemical laboratories, in addition to a spacious drawing hall, in which the scholars can make their experiments. Practical school work in physics and chemistry is also included in the syllabus for the training of teachers, so that in future each teacher will have had suitable and sufficient experience in this work. With all this activity, which begins with the first day of school life and ends eight years later on the last, we can certainly master only a small body of knowledge, but we shall perhaps attain the supreme goal towards which every elementary school must strive—that each boy and girl on leaving school will be able to begin to learn.

Thirdly, I should like to lay special emphasis on the

necessity of drawing. It seems incredible that the value of this subject should not yet be appreciated. And yet instead of the adage: "Every lesson a lesson in language" I should like to substitute, "Every subject a subject for drawing." Quite apart from the fact that drawing is an excellent school of observation and is always a certain check on the correctness of observation, there is hardly any activity in which the majority of children have so much natural enjoyment as in drawing. Drawing from memory in particular is a matter which is nowadays almost entirely ignored, whereas it should be one of the chief fields for the growing formative powers of the child and a never-failing source of true love of work. Fortunately we in Germany, through the precedent of Hamburg and the example of Prussia and Munich, are on the best way to give to this means of education the free scope which it has long deserved.

Fourthly, the development of independence and self-control could be encouraged more than it is. The best means to this end is to follow implicitly the old demand of Pestalozzi for self activity on the part of the scholar as far as this can be done in class. The more we lead a boy by a string, in fact the more obviously we lead him at all, the less he develops initiative and the consequent pleasure in work. The further, however, the teacher retires into the background (without of course losing sight of the boy altogether), the more he regards himself as a sort of ferment which has only the function of setting free the constructive powers of the pupil, whose impulse to reveal his capabilities and to fashion that which is in his own soul, grows all the stronger. The majority of scholars will then, of course, be separated

according to their natures and interests, and the work of teaching and educating will be increased, but at the same time the teacher will find his own reward. In the present state of our schools, especially in the country, this requirement can only be carried out to a very small extent: it should not, however, be neglected by any teacher nor be absent from any plan of teaching.

But the fifth point is one which can be carried out at once. What is here needed are examiners and school inspectors who judge not so much what is dealt with as how it is treated; who ask less for much knowledge than for independent ability; and who can overlook mistakes in spelling, grammar, and even arithmetic in favour of an independent conception, exposition, and method of expression on the part of the child. I am quite convinced that the teachers would then follow, and would try to do justice to the duties of the school, though no doubt these duties would have become more onerous by the abolition of hard and fast rules. And should the present training of teachers not suffice, then this quantitatively smaller, but intrinsically higher, conception of the work would bring the question of suitable preparation automatically into a more favourable position.

Should the elementary school succeed in this way in teaching the child to "try for yourself, and learn by doing," as Armstrong demanded towards the end of the last century in the struggle for self-activity in English schools, the school will have accomplished a great work: the first and irrevocable step towards the vocational training necessary to true education will have been taken. If we in Munich have gone a step further and in the eighth and last school

year have already taken into account the future of the boy as an artisan, and of the girl as the manageress of the household economy, I am convinced that, however doubtful this may appear to some, we have acted in a right sense of our duties. Practical handwork, drawing, physics, and arithmetic are all taught in the degree and form which the future occupation of the boy will require. They are taken in close connection with history and geography where an endeavour is made to bring before the eyes of the boy the commerce, exchange, industrial development and political progress of the nation during the nineteenth century. Biology meanwhile enters into the service of hygiene. Only physical exercise and the teaching of language remain in the paths which are usually considered proper to general education. In the same way, in the highest class for girls (the eighth school year) the whole teaching centres round the school kitchen, and the questions of feeding, housing and clothing which form the problem of domestic economy. I will not blame those who will hear nothing of such a syllabus in spite of what I have said above, if they will only agree to make the contents of the last year's work suitable to the age and the receptive capacity of the children, and observe the four cardinal points which we have laid down as postulates in any appropriate educational system; viz., limitation of the matter taught; increased opportunity for independent observation, construction and exposition; plenty of practice in drawing and its application; judicious furtherance of the moral power of self-control. They have the strong argument in their favour that all vocational training, to be capable of true development,

needs a certain general foundation which the masses must find in the elementary school and for the professional and cultured classes in the higher schools. There is certainly ground for disagreement as to the height to which this foundation must be raised before vocational education begins. What is not useful is merely a burden, and all pure striving after knowledge which will not sooner or later be applied to personal, practical, or public life is the work of Danaids. Consequently one should not blame those who in this matter hold contrary opinions, so long as they are able to ground their positive suggestions well. Time and experience will prove their worth.

As soon as boys and girls of fourteen go out into the world those of them who are capable give their whole attention to the work upon which they enter. Perhaps this age of leaving the elementary school is too early. But it would not be too early if all employers stood as high as Ischomachos in the "Economicus," for the education of the boy in and through his trade would then lie in the very best hands. But no nation on earth is so happily situated. Instead of such instructors, or beside them, other institutions must come, as I have suggested in my book "Education for Citizenship." For the masses, however, the proposals there outlined are, for reasons into which I cannot enter here, not practicable. For the time being, a well-arranged continuation school must serve to help:—a school spread over the whole of the apprenticeship years and giving an ample number of courses in the daytime.

From the very first day of this school the methods of the elementary school must be left behind, excepting

in so far as they have already taken the direction found in Munich. We in Germany are now well advanced in this question, because the idea of putting the vocation in the central position in the training there given, is constantly appealing to wider circles. The danger of petty commercialism is certainly present; it does not however lie in the training itself but in the way in which it is carried out. I can wander along a street with blinkers on my eyes without pausing and without diverting my attention to right or to left; I can also go the same way without blinkers, and pick up things as I go, choosing not only what lies directly on the road but what lies beside it, and can establish relations with those who walk with me. There is a vocational education with and without regard to the formation of my own character. We unfortunately see the petty commercial spirit in almost all our existing trades, arts and crafts, and agricultural schools. Perhaps this very fact may be to blame for the mistrust which the vocational school engenders in the minds of those who are aiming higher. There is in a modern state hardly an occupation—certainly no skilled one—which is not already, or cannot be, united by a thousand links to the other similar activities of the nation—to its manual occupations, to its art or to its science. To prepare a boy for a vocation, tracking each of these threads to its source, and by following at least the most important of them, by laying bare the complicated network of common interests or at least tracing its outline; this is what I mean by *true vocational education*, for it leads from the workman to the man.

I must limit myself to merely indicating this point of view, for I have in recent years written and spoken

so much on this subject that I can refer my readers to what I have previously said for details. I must however again raise one point; that in continuation schools workshop instruction must not be forgotten. For the few lucky ones who have an Ischomachos for a master it might perhaps be dispensed with, but for the great majority of our working youth, it is, at any rate at present, essential. It is far better to restrict all education other than this to a decreasing minimum, than to turn out a youth in his eighteenth year who does not know his work, and who has never seen good honest thorough work; who has never tasted the joy of creating, which lies at the root of all true work, and who has consequently never really discovered the foundation on which all true education alone rests, and from which alone it can develop. I sympathise with those to whom this demand causes anxiety, for these doubts have risen a hundred times in my own breast when of the few hours which are to-day at our disposal at the continuation school, I have apportioned from a quarter to a half to workshop teaching. But a rigorous examination of the existing conditions, and of the educational possibilities amongst which the children live and which are presented by their own often impoverished natures, has day by day strengthened my belief in the justice of this requirement. The more we allow ourselves to be guided by actualities and not by preconceived ideas, the sooner we shall discover the right course.

It is related that Antaeus the son of Poseidon was a giant mighty and invincible as long as his feet were planted on the earth. The saying is instructive for education too. It must always have one foot on the

firm ground of work; it derives its strength only from earnest, intensive, practical, productive activity. The manual labourer, the peasant, the artist, the savant, all come to the heights of true manhood only through independent work at definitely fixed tasks. Difficult indeed is the question for a factory hand, at least for one whose work is only mechanical, and who has become a part of a machine; nevertheless even for him, provided he has the time and the ability to take part in the life of his home, of his trade society, and of his country, and provided that he is secure against the terrors of destitution—even for him a way may be found of enabling him to love his work, and to share in the blessings which lie in all true work The world has at any rate no other way to cultivate men. Thus we can understand the wonderful words in which Carlyle sang the praises of work. "All true Work is sacred," he says in "Past and Present." "In all true Work, were it but true hand-labour, their is something of divineness. Labour, wide as the Earth, has its summit in Heaven. The latest Gospel in this world is, 'Know thy work and do it.'

"Foul jungles and tares are cleared away, fair seed fields rise instead, and stately cities; and withal man himself first ceases to be a jungle and foul unwholesome desert thereby. . . The man is now a man. . . Blessed is he who has found his work, let him ask no other blessedness."

CHAPTER III

PRODUCTIVE LABOUR AND ITS EDUCATIONAL VALUE[1]

KNOWLEDGE and ability are not the same as culture: they are not even a reliable measure of the culture of an individual, for if we are to regard them in this light, we must make an important distinction, the neglect of which is responsible for the prevalence of the wrong notion of culture under which we are suffering.

The individual possesses two kinds of knowledge: firstly, a knowledge won by the work of others and transferred to him; secondly, knowledge obtained by his own experience and rooted in himself.

In the same way ability is twofold: one kind is mechanical, attainable through industrious application and capable of producing results of value at the moment; the other is founded on natural inclination, non-mechanical, and capable of producing results of original worth.

Transferable knowledge like mechanical ability can be taught, whilst self-acquired knowledge and productive ability cannot. Knowledge which is a product of mere learning is often weak in itself, puffed

[1] Lecture delivered March 6th, 1906, in the University of Munich: (extended and revised).

up though it may be; it brings to the soul no greatness, and no strength, but acts often as a decorative cloak for a weak and puny mind. Knowledge based on experience arising from creative capacity nearly always shows the opposite characteristics. It makes a man modest and gives him at the same time motive power. In spite of all this many of our schools have in the course of the last century confined themselves to the handing down of book-learning and mechanical dexterity, for these are things which can be picked up by all who have a sufficiency of memory and industry, either natural or enforced. Hence it is possible, in a country where, as an Englishman says, there are only two classes, those who examine and those who are examined—for the school authorities not only to make examining easy for themselves, but also to obtain a teaching staff without difficulty; for anyone without special talent can learn to teach book-knowledge and to conduct drawing and singing lessons, etc.

The unsatisfactory effects on character of a school system based on book-learning, the rapidity with which what is taught fades from the mind, and the greater demands made by modern life, have caused educationists to emphasise anew the necessity of the teacher being not merely an instructor, but an educator in the real sense of the word. Towards the end of the last century another old lesson was rediscovered, namely, that in our mechanical school system the specific productive talent of the child falls too often a victim to the machine, for it often fails to respond to a course of memorising and mechanical dexterity because the mind is too much occupied with quite different things. Certain courageous folk discovered that quite a new

spirit would enter the school if second hand knowledge and mechanical dexterity were to give way to productive work and knowledge acquired by experience. The days of art education came and new formulæ attracted the interest of the public. With a rare enthusiasm (which had not always the advantage of clarity) the hands of the clock of educational wisdom which had been standing for practically a century opposite book-learning and mechanical dexterity were put back to productive work and knowledge based on experience. Even to-day some apostles in this new cause are passionately preaching the gospel of war against the former system.

I not only lived through the brief reign of art education but was also taken into the counsel of its advocates. The sudden revivification of an old educational maxim often forgotten in practice had revealed in a new light a point which eight years earlier, in my book: "Considerations on the Theory of School Curricula," I had called the sorest of sore spots in our modern educational technique. I also recognised the dangers which must arise out of the sudden revolution which this gospel preached. After any long period of uniform practice which fails to fulfil what was hoped of it, one is but too ready to take up something new—only after repeated disappointments to abandon the revolutionary for the reformist method. To do away too suddenly with mechanical dexterity and book-learning would also put the results of productive work in a questionable position. We see this every day in even a superficial glance at modern scientific and æsthetic literature or pictorial art. No valuable creative work is possible without that mechanical

power which is obtainable only by a renunciatory struggle or without a certain amount of knowledge which can no longer be gained entirely through individual experience. Another essential point is that by no means all creative work has educational value. Consequently, it seems worth while to consider this new gospel impartially and try to extract the valuable kernel which, in spite of adverse criticisms, undoubtedly lay at the root of this brief reign of art education, and, at the same time, to save from the hands of enthusiasts that part of the present system which deserves to remain.

Until a child has mastered the art of speech all its knowledge is of the kind of which we have already spoken; that based on experience. With the development of the understanding and the use of speech the knowledge which we acquire from past generations is constantly being increased.

Knowledge so acquired is of the greatest importance, in so far as the child gains it in proportion to his own desire to fill the gaps in his experience and weld it into a homogeneous whole, and to avoid those pitfalls into which our forefathers were bound to fall.

With the primitive ability of the child the reverse is the case: it is an instinctive mechanical function until experience has given a certain formative impulse to his knowledge. This stage is, however, attained fairly early,[1] in the case of mentally normal children after the first three or four months, with mentally weaker children often much later.

[1] W. Preyer notes in his book, "Die Seele des Kindes," p. 215, that in the sixteenth or seventeenth week the will begins to manifest itself through co-ordinated movement of the greater groups of muscles, and that about the same time the first successful attempts at imitation are made.

The gradual development of the mind has the character of productive work. New conceptions are formed from day to day, and new feelings arise; and so, gradually, the childs learns to recognise its own personality, and to realise its own will. All this is only *internal* productive mental work. From the moment when the child begins of itself to play alone in a corner of the room the *external* productive work also begins: it seeks to express the concepts of its mind. I will deal with this more fully later on. This normal process of development is interrupted by the school, or, at least, by the school as we know it. This modern school of ours is an instrument of the State which concerns itself with replacing the slowly developing knowledge obtained through experience by inculcating the accumulated wisdom of past generations, and with fostering, as rapidly as possible, the mechanical ability so very necessary for all branches of culture. In improving this instrument in the way I have indicated, the process of development would be helped by factors different, but all good, in themselves. One of them has already been mentioned; traditional knowledge may in certain circumstances greatly aid the knowledge we acquire by experience. When the young Baer, who afterwards became a great zoologist, came to Döllinger, in Würzburg, in order to attend his lectures in comparative anatomy, Döllinger said: "Why do you need to hear lectures on this subject? Bring me some animals, and dissect them here." Baer brought him a leech. Döllinger explained how it had to be prepared under water, and gave him Spix's excellent monograph on the structure of the animal. His observations on the leech led the young zoologist to read the mono-

graph carefully, and reading it led him again to fresh observations of the leech. When the nine-year-old Adolf Baeyer was bringing the whole of his father's house into jeopardy with his youthful experiments in chemistry, his father gave him pocket money requisite for the purchase of the materials he wanted and Stockhardt's text-book on chemistry and left the two—the living Baeyer and the voiceless Stockhardt—to their fate in a corner of a passage where the boy had erected his so-called laboratory. This laid the foundation of the great scientist's future work. We see from these two examples how knowledge gained from experience must be combined with book learning in order that the union may bring forth good fruit.

Mechanical dexterity is also of great importance for our life in general. Reliable mechanical ability is not only the necessary foundation of all higher productive ability, it is, even while it is being practised, an excellent school for learning certain virtues of character. The more difficult its acquisition so much the more demand does it make on patience, endurance, perseverance, conscientiousness, cleanliness, self-restraint, etc. . . We certainly cannot afford to do without some training in mechanical ability, in educating our children in these elementary virtues.

But it must be noticed that this mechanical ability can only be obtained by *practice.* Ability once obtained is sterile until fertilised anew. This fertilisation is two-fold—external, through praise, blame, fear, need, ambition, etc., and internal, through an early education to productive work, which, however, naturally pre-supposes a certain talent in that direction. In our modern schools the external fertilisation is the more usual.

The internal form is only found in the case of specially gifted teachers, and we search in vain for it in the official schools and curricula. The roots of this lie not only in the history of our schools, and in the over-estimation of knowledge passively acquired, but also in the system of dealing with children in the mass, and not as individuals, in the higher cost of the right kind of schools, and in the by no means negligible difficulties of working them and providing for their inspection. Failure in the practice of many different kinds of mechanical work, or conventional ability, and in imparting conventional knowledge, can seldom be attributed to the large size of the classes dealt with; and most people are capable of a modest amount of mechanical training, just as any poodle may be trained to fetch and carry. A curriculum based on the importance of productive work, on the other hand, finds great difficulties where the number of scholars is great, because far more attention must be given to the state of development of the child and to its individual talent than in the mere transference of knowledge to be memorised and in the exercise of mechanical power. When we combine knowledge based on experience with knowledge acquired at second hand, and mechanical with productive work, we must *restrict our ambitions*, both as regards knowledge and ability. Finally, it is much easier to train great masses of teachers as agents for the transmission of knowledge than to produce men who will use their own stored up energy to stimulate the productive powers of the children under their charge.

These difficulties should not, however, prevent us from attending to the demand, which is now so

energetically put forward, that our modern schools—which, in spite of all their nominal differences, represent a single educational system—should be so constructed as to be capable of efficiently meeting the various requirements of modern life, by recognising the productive power of the child. From what has been said it will be clear that our modern school system has unquestionably many defects on this score. We shall recognise these all the better if we examine more closely the conception of productive mental work. We shall then also see clearly the well-defined limits of the educational power of productive work as such.

It will be well at this point if we consider for a moment the various interpretations of the idea "work," according as it is used in the ordinary, the economic, or the physical sense. By so doing we shall obtain a general criterion which we may designate as activity. A further investigation should show how far mental activity is work—productive work.

In the *economic* sense, all work which produces goods is productive work. The hewer in a coal mine, the peasant at the plough, the factory operative at the weaving-frame, the goldsmith in his work-shop, are productive workers, but we cannot directly take over these conceptions and apply them in our field, because this production of goods is also to a great extent the result of purely mechanical labour which we do not wish to bring into these considerations. In the intellectual sphere we must also regard certain kinds of work, for instance, the transmission of mental values from one individual to another—*i.e.*, teaching—as productive, whereas in the economic sphere the distribution and transport of goods is not regarded as productive

labour. Yet both kinds of productivity, in the material as in the intellectual sphere, have a certain criterion—the production of new goods; a criterion present also in the distribution of mental values.

Strangely enough this criterion is not always present in the ordinary conception of the idea "work." The man in the street uses the word "work" as synonymous with "activity" or "occupation" without necessarily entertaining the idea of any particular usefulness or uselessness, unless, perhaps, in the dark background of semi-consciousness. The production of mental values is thus either not at all or only partially counted as work, for work in its vulgar sense is conducted almost exclusively with the visible expenditure of muscular energy. Moreover with the popular conception of work is also bound up an idea of disagreeable sensations, of uncomfortable exertion, of fatigue and lassitude. Certain economists seek to connect this criterion with the economic conception of work,[1] but only thus to obtain a better measure for the real costs of labour than is found in "wages."

In the *physical* sense, the conception of "work" has nothing whatever to do with the production of goods. On the contrary, the physicists of to-day know that every event in nature is nothing more than the transformation of one store of work into another; that, physically speaking, no unit of work can be produced or created, and that when in one part of the world new work is done, in another part an exactly corresponding amount disappears. The conception of work formed by

[1] *Cf.* Heinrich Herkner, "Die Bedeutung der Arbeitsfreude in Theorie und Praxis der Volkswirtschaft" (Dresden, 1905, Zahn und Jaensch).

the economist, the man in the street, and the physicist is therefore not the same.

They all, however, have one thing in common with *mental* work, namely, the idea of activity. In the popular conception this is not infrequently confused with bodily activity. We do not, however, always consider mental activity as work, or, at least, not as productive work. There is, for instance, one kind of mental activity which, although it is often creative, is regarded as the antithesis of productive work, namely, play. Here also we are not at all logical in our mode of expression. We speak, for instance, of a "game" of chess, which, rightly carried on, not only requires great mental exertion, but is also mentally productive work. This we do in spite of the clearly established difference between work and play. But what is the real difference between work and play, and what have both activities in common? The answer must be made clear if we are rightly to understand the educational value of productive mental work. If we realise what play really means, the meaning of productive work will also be clear.

Play in its simplest form is only found amongst children, for in the case of older people there is almost always some other motive than that of play itself. The child plays at the moment when its world of imagination is awakened and excited by any object, even the most primitive. It collects together pieces of wood, rags, strings, heaps of sand, stone, etc., in some corner of the yard or garden. The pieces of wood become men or animals, the rags clothing or ornamental hangings, the sand heaps mountains and valleys, the stones buildings and bridges, the string fences or hedges

Thus we find the child engrossed in mental activity through which it either obtains new ideas of things or associates its ideas in a new way. The association of the ideas—which is nearly always accompanied by a kind of animation of the external world [1]—is however in this childish play almost always unconscious. The associations are brought about as in a dream or a fairy-tale. The child makes no definite selection, because it has no definite object or end in view. The imaginative process is admittedly excited by the outer world of the senses and led by it into fresh paths, but it is more or less independent of the plaything of the moment. The degree of dependence varies with the artificiality of the plaything, and with its resemblance to the real object. Certain artistic or technically perfect toys are found by experience to have little attraction for a child up to its eighth or tenth year because they are a direct hindrance to a free play of the imagination. For the child is only interested in playing so long as he continues to discover new things, whether by extending and enriching his ideas or in associating them, or by finding a continual round of fresh occupations.

Consequently certain toys or games retain their interest for the child for many years. Others sooner or later lose their attraction. For every period of childhood, or in other words, for every stage of mental development, unconscious mental or physical advance is the secret of the attraction of play for a child, that is, for a mentally normal child; intellectually weak children, with very insufficient and, still more, with very inactive

[1] This process is an important element in all later artistic creation. It appears as the specifically personal contribution in an artist's work.

imaginations, or weakly children with slow imaginations, have no pleasure in playing by themselves. This will be realised from what has gone before, for such children need always stimulation from outside, from their parents, brothers and sisters, and comrades. A well-known educationist—I believe Niemeyer—has consequently called it the chef-d'œuvre of all education to find for each period of life a suitable *occupation* for the pupil.

Let us now on the other hand regard the activity of one engaged in intellectual work as opposed to play. He sets out too, like the playing child, from real facts which stimulate his whole imagination. The man of science is occupied on some piece of research apparatus, the materials, and the results. Every new result enriches his world of ideas. The new result allies itself on all sides with a hundred others in the paths of association which have become well-worn with use, and whilst the world of things before him finds through the opened door of his senses its complementary sensations the world of his ideas is also extended. If his work is successful he wanders through this world only vaguely directed by the realities outside. We find a resemblance between the child playing his fantastic games and the experimental investigator, in the fact that research, like play, attracts the naïve spirit—I use the word in its best sense—so long as there is mental gain in view. But now comes an important difference. The imaginative process of the experimenter is no longer without rules, no longer unconscious, but guided by the formulation of questions, by a multitude of scientific laws which with lightning rapidity contradict or confirm new associations, and not infrequently by some

definite end in view. Whilst in the case of the child the productive activity is carried on with unbroken pleasure the experimenter is in a continual state of oscillation between tension and relaxation, pleasure and dissatisfaction, according as promising or unsatisfactory associations of ideas are produced. It will therefore be seen that in order to bring the playful productivity of the mentally healthy child to the mature mental productivity of the man a many-sided mental discipline must be introduced into his play, at first only to a very small extent, but afterwards more strongly, and will then soon lead to observation, obedience, honesty, and the overcoming of difficulties.

There is a second and yet greater difference between the two kinds of productive mental work. It is perhaps more essential than the other, for even in the child's fantastic occupations there is certainly no mere anarchy in the combination of ideas.

There is in every spell of his play a point at which satiety sets in. The older the child grows the less do his old games interest him; he longs for unity and intelligence and they have ceased to ask him questions and to give him answers. Active sport comes more and more to the front, and exercises a strong attraction, not always for its own sake as sport, but as an intermediate thing between work and play, as a game with a definite goal outside itself in which the *overcoming of difficulties* is the chief object. The game itself as mental activity which follows no particular object and which can neither help nor hurt others, has its own limited sphere in the life of the rightly brought up normal man and of the free, unspoiled living animal in its natural healthy development.

With real productive mental work, so long of course as it is honest and straightforward, the case is quite different. Here there is no stage of satiety. All is full of life, and, in contrast to a game, is directed by purposes which lie, not outside, but in itself, and which, so far as they are attained, become, owing to the economy of thought, the foundations of new ends and ambitions. Productive work within the limits of the capacity of the individual is always the origin of a purposeful growth of mental power, always striving towards new activity. *In this, its characteristic difference from play, lies the great educational force of productive work.* Everybody who is really educated has himself experienced this, and one may perhaps even say that he who wishes to know whether he is on the true path to culture should ask himself how great and how honest is his desire for education, which need by no means be of a purely intellectual nature, but may equally well be of a moral kind. To the man of science and the artist, as also to the man who is striving towards true knowledge, this ever-youthful, ever-increasing inner *motive force* of productive work must constitute the main feature of life. Through it the true scientist is driven relentlessly to carry his knowledge beyond the old traditions and the true artist to strive ever the more passionately to subjugate mannerisms, technique, and passing mode to the veritable expression of his own inward soul. . . . That is the chief blessing of productive work, that it can prescribe *purposes and duties* which lift the joy of creation above the sorrows and confusion of everyday life, just as the religious man is elevated by the force of his unwavering faith.

It would seem well before going further to sum-

marise what has preceded. Productive mental work is an activity which creates new ideas and new combinations of ideas to effect a greater unity in the soul, or its outward revelation or realisation. Thus it is to be distinguished from the play of a child which as such lacks any definite purpose of creating ideas and combining or presenting them in any characteristic manner. Productive mental work presumes in advance the existence of a ready capacity for combining ideas, as does the game which the child plays in solitude. But it differs from the latter in the discipline which directs the process into the right paths. This discipline is partly inherent in the soul in the case of the born investigator or the artist, partly acquired or at least improved through practice, in which case a gradual transition from play to work may occur with great profit. Productive mental work is an excellent educational instrument; yet it presupposes a certain natural capacity. It creates an insatiable craving for continuously increasing activity which forces the individual to incessant tension and exercise of his powers, and thus inculcates the elementary virtues of industry, endurance, concentration, and consciousness which would otherwise have to be developed by external compulsion.

Productive work gives really new experience, which enters into immediate and intimate connection with the whole of our remaining stock of ideas, because it meets the needs of the soul at that particular moment. These new connections give rise to new powers and provide a new motive force for creative ability. The experiences and learning of others, which we obtain through passive receptivity, are only of importance for

our own mental life in so far as they unite with our own similar experiences, and in the long run leave us uninspired and cold. Productive work on the other hand keeps our whole being at a higher temperature and thus becomes a source of enterprise, of courage, of self-dependence, of enthusiasm, and of an almost unconquerable love of work. Here lies the sovereign educative value of all productive work.

In order, however, to have its effect this educative force must work on a secure foundation, *i.e.*, not only must talent and maturity be present but also a knowledge and ability which cannot save even the most talented from the toil and sweat of unproductive activity. This is a matter which is nowadays only too readily forgotten in the strife for premature development in art and science, and lately also in school and domestic education.

Productive mental work is however, in the first place, at all events, an egoistic force. It is based on the development or exhibition of the life of the *individual* soul and in this lies its danger in education. Science, like art, does not demand that its devotees be all round men. A purely intellectual activity on the part of a savant makes only half a man of him. It leaves undeveloped his æsthetic perceptions and his moral power. In the same way the artist's impulse to reveal his art need not—in so far as it is unguided—develop in a moral direction. It may exhaust itself in pure formality in a world of ideas far removed from the actualities of life. Productive work in art or science must place itself to a greater or less degree at the service of the culture of mankind if it is to create real character. But in such a service, and all the more when that service is

unselfishly rendered to humanity, productive mental work creates permanent satisfaction for life.

From this aspect of productive work arise many points of fundamental importance, not only for education as a whole, but also for our organisation of schools and teaching. There is no doubt that we give far too little place in our schools to productive work. It is almost excluded from the elementary schools. In the higher schools it is certainly found in some subjects, mathematics, the translation of foreign classics, sometimes in composition and recently too in drawing, but even here, as a general rule, only to the extent to which the teacher has understood how to avoid the overwhelming masses of material without coming into conflict with the curriculum. Strangely enough, it has only recently been found at all in those subjects in which it could be most fruitfully developed, in natural science, zoology, botany, mineralogy, and especially in physics and chemistry. On the other hand, in institutions of university rank it has held its own, firstly in the philological courses and then in laboratories, clinics, etc.; even here, however, more space could be given to it than has hitherto been the case. Our universities still lay far too much stress on lectures as such, which are not infrequently more profitable both mentally and materially for the teacher than for the student. One must also remember that the often incredible overcrowding of the institutions we already have, especially of the great universities, and the lack of demand for independent work from the scholars—with which I have dealt above and which results from our school—together with the fact that examinations are based on a cram-system, frequently

prove a great obstacle to the best developments of productive work.

In most of the girls' schools the case is worse than in those of the boys'. One must have seen in individual schools how compositions are set on impossible subjects, kindergarten instruction given in arithmetic and geometry, the formal teaching of a modern language floundered through, and productive work entirely excluded, before one realises with wonder that there are women whose ability to think has survived their school days.

That productive work need not be entirely excluded from the elementary school in spite of the age of the scholars and in spite of the necessary training in elementary routine is shown by the construction of workshops, laboratories and school-kitchens, the revolution of the teaching of drawing, and the modest beginnings of a sensible way of teaching composition, which relies not on the continuous imitation of predigested examples but on the representation at the earliest possible age of individual experiences.[1]

The whole secret of the development of productive work, from the elementary schools to the university, is to be found in setting the scholar free to gain his own experiences in learning. Such a method certainly presupposes the right master, with a self-dependent, creative, adaptable, sympathetic spirit, capable of methodical management—though in quite a different sense from that found in the modern science of didactics. The modern finesse in method may in fact become fatal to creative talent. We praise the teacher

[1] *Cf.* Anthes' pamphlet, "Der papieriene Drache," the primers of Gansberg, and Scharrelman's book, "Vom herzhaften Unterricht."

who can so diminish the difficulties in the way of grasping a new thing that all the pupils, if possible to the same extent, slide across into the new idea as they would slide along a bit of asphalt pavement. This praise must, however, be much qualified. For a class of mentally inferior children he may perhaps be right, but for a class containing talent of all kinds it is very different; for the mental power of the children grows, as does bodily strength, only through overcoming difficulties. Yet what to one child is a difficulty is but play to another. The eagle must not practise flight in the degree which is suitable for the sparrow. He alone is really to be praised who so arranges his teaching that each degree of talent meets with the difficulties suited to it. I admit that this is impossible so long as modern teaching is based almost exclusively on reproductive work. It is however always possible where a large amount of productive work can be arranged, and where the door is open to practical work in the various subjects. Then everyone —as in mountaineering—would get exactly as far forward in an hour as his strength would permit, whereas with the rope of a misunderstood method only what is called "even progress" is possible, and this, as our schools permit of it to-day, not infrequently overburdens the weak whilst at the same time it is tedious to the strong.

It is certain that a greater field for productive work could be found in the higher schools. It would also be found to a greater extent were not the whip of "positive knowledge" constantly being cracked over their heads. I must acknowledge that the amount of positive knowledge required in these schools *can* be

expected for a short period of the time from a normally talented, moderately industrious youngster: but only at the cost of productive power. An American, who in 1907 stayed in Germany for several months, told me quite seriously that it seemed as though German children had so much to learn in order that they might not think too much for themselves. It is really to be deplored that such a large proportion of our school knowledge is purely memory work which disappears as soon as the pupils cease to occupy themselves with it: yet to obtain it time is stolen which should be given to encouraging real ability, and, as a result, the smaller, but nevertheless more valuable, seed of productive talent may be choked. But what is most remarkable is that knowledge is carried over into the natural sciences in a way directly opposed to the mental work which characterises them; it is transmitted and not allowed to be acquired, and given more as book learning than as knowledge gained through experience. Education in the natural sciences has been given a wrong turn from the beginning by the lack of means for the suitable expansion of the schools, by a general undervaluation of the importance of knowledge as such, and, not least, by a false application of that method of transmitting knowledge of a linguistic-historical nature which can still be successfully adopted in the right sphere even to-day. The folly of this stereotyped method can easily be demonstrated. What would these same schoolmen, who to-day regard laboratories and workshops as a pollution of our higher schools, say if a joiner on taking an apprentice into his service gave him daily lectures on the different kinds of wood, tools, and machines, busily experimented for his benefit,

planed planks before his gaze, sawed, glued, made him each day learn by heart a paragraph of a primer on joinery as home-work, and each month write a thesis on the use of planes, the preparation of a good glue, the construction of a wardrobe, etc., and then accepted him into his shop because he knew everything which he had learned by heart during his three years' apprenticeship? One need only consider this example to see how ridiculous it is. And yet that is exactly the way in which we teach and examine in physics, chemistry, zoology, botany, and mineralogy in our schools. If, now, someone replies that I have chosen a false example in that the joiner's apprentice must afterwards become a joiner, and must therefore be practically trained, and not merely *know*, but also *practice* joinery, whereas the pupils at our higher schools will afterwards become theologians, jurists, philologists, and teachers, and not investigators of nature, and that, therefore, this knowledge alone is sufficient for them, then I could answer that he had not understood the true meaning of training in the natural sciences. In such training the *method* of acquiring the knowledge is almost more important than the knowledge itself. For this kind of work has the advantage over all other school work, that it is productive work in the best meaning of the word. It teaches us how to observe nature and men, how to put questions to nature and men, and how alone to obtain that valuable knowledge which trains us to regard all phenomena in natural and human life objectively, how to trace strange phenomena to their origin, and, in short, how to help ourselves in so many situations in life.

The most valuable thing that we can hand down to our pupils is not knowledge, but a sound method of acquiring knowledge and the habit of acting on their own initiative. This cannot, however, be learned—or only imperfectly—through lessons and lectures; like all productive work, it can only be acquired by practical work at an early age in the activity in question. Work, especially on one's own initiative, builds up character; knowledge influences it only in a supplementary degree. The golden rule of all teaching—although taken by itself it goes too far—"Tell the child nothing which it can find out for itself," is often heard, but only too often contradicted in practice; yet it is nowhere more important than in the natural sciences. Every other way of acquiring knowledge is contrary to the spirit of the natural sciences, and Hugh Gordon says, with justice, in his little book, "An Elementary Course of Practical Science," which is intended to show the elementary school teachers in England how to introduce first lessons in physics: "Science had much better be left alone than be taught unscientifically."

How successfully and at how early an age instruction in the natural sciences—provided it is given in the one correct way—can be begun in the case of talented children is shown by the example of Baeyer which I have already quoted. In his twelfth year Baeyer discovered a new double salt ($CuCO_3 + Na_2CO_3 + 3H_2O$), which was first described four years later by Struve, and demonstrated after Baeyer's method by Gentele. When a savant like Baeyer ascribes the greater part of his later development to this early productive work, and consequently advocates emphatically that training in the natural sciences which is to-day partially lacking,

nobody has a right to speak of him as an unusually talented man who would have arrived at his goal in any case. We do not know to-day how much productive talent—weak though it may have been—has been nipped in the bud by our modern school system, how much enterprise, self-dependence, and strength of character we have buried among the ballast of memorised instruction with which the minds of our children are weighed down. On his seventieth birthday Baeyer made a speech to his friends, admirers, and pupils, in which he showed that the natural sciences must not be treated as sciences only, but as a treasure of civilisation, or as wisdom wrought into life through the course of the ages, which should teach us how we must arrange our personal life and our life with our fellow-men.

In order that this be rendered possible the natural sciences must not so much be *learned* as *experienced*, for only knowledge acquired by experience can influence our actions. We decided some decades ago to erect in our technical schools workshops of all kinds, and where it was at all possible to replace theoretical by practical teaching, for chasing and engraving, planing and forging, cannot be learned by looking on, or from books. I am convinced that even in our secondary schools laboratories and workshops will hold their own, or, rather, that whether we want to or not, we must follow the example of other nations, because a school system, with its combination of traditional with self-acquired knowledge and of mechanical with productive ability, must give the ascendancy—both moral and economic—to that country which first adopts it as a whole. The question carries its own answer. That state which

grapples courageously with the question before necessity drives it to do so, will render itself the truest service.

There is another, more difficult but equally important, question as regards the educational value of productive work, and here we cannot offer a theoretical solution so certain as in the problem of training in the natural sciences. We have recognised that unproductive work gives no meaning to life and that its educational value is limited to the extent to which it serves as a basis for a higher productivity and for the exercise of the elementary virtues of citizenship. This is not only of importance for the education which our schools are in a position to give, but also for the much greater educational power of life.

For a great part of our industrial workers there comes a time when they attain the maximum of mechanical dexterity and when no external force can bring about an increase in efficiency. From that moment the cloud of life-long mechanical, monotonous work spreads itself like a thick veil over the once sunny lives of millions. The poorest cottager who wins his bread under ever-changing conditions in the sweat of his brow from the unfruitful soil of the wide and marshy heath seems to me a richer man than many a well-paid factory or home worker who, from morning to evening, for a generation, pulls a handle or treads a pedal with cold, undeviating regularity. Take away from such a man his devotion to the faith which makes him say, "Lord, Thy Will be done"; let him see his more happy fellow-men treading the high places of life while he is cut off from them and from all pure joys and comforts, and this slave of the machine is poorer than the slave of Rome or Greece. Work, which should

redeem all, leaves him unredeemed; the warmth of creative activity leaves him cold. His apathetic feelings respond only to those uncertain prophets who feed his longing for the impossible age when all differences shall disappear. It is very thoughtless to fight these poor souls, who, in their hunger for the good things of life, combine into mutual groups to fight under another banner than that which finds the solution of their ills in the requisite change in their external and especially, also, in their internal conditions of life; and which tries to give them a life of as much promise as the lives of their happier—though perhaps more hard-working—fellow-men. They themselves put their trust in the great results of a socialisation of all means of production and the abolition of property. A gross deception! For even after this socialisation there would be millions of slaves to machinery, and they would probably then be poorer than to-day; for, with the abolition of property, many egoistic motives for work would also disappear, which to-day keep the mind active, often even into old age. Only one remedy can help here, "*Give them a fuller life.*"

But what kind of life must that be? This is the great riddle which meets all who enter the subject of general educational policy. "Give the man Religion," say the Churches; "Lead him into the temple of Art," says the Artist; "Let them learn the true relations of phenomena, and realise the position of their work in the great social scheme for the production of goods," counsels the Intellectual; "Give them sufficient wages and good housing conditions," say the Economists; "Less of this education and more respect for Authority," is the theory of the Superior Person;

"Panem et circenses," summed up the wisdom of the Senators of Rome.

It is not to be denied that real and deep religion, bound up with a steady trust in God, supplies a rich, even unalterable, motive of life. But it is also certain that, with the increasing education of the people, this religious motive takes—and according to the nature of the individual, must take—a more and more personal form, which differs, more or less according to circumstances, from the unchanging formula of church teaching. This development, which lies in all civilisation, leads innumerable persons to a separation from the church communion to which they belong, and, consequently, from the source whence springs their motive in life. This separation may be complete or internal only, but the process which causes it is a natural law based on the characteristics of the human mind. And now comes the question: "Can every individual, freed from all communion with others, independently cultivate his religious life, or not? And if not, what has he to take the place of his staff?" I need give no answer. We all know that the traditional religions only solve the problem for one part of mankind, in general for those who, either blessed with worldly goods or not, have no independent impulse to develop their spiritual life and to bring their religious views into harmony with the other constituents of their minds.

A solution of the problem is to be expected far less from those who wish to replace the joy of productive work by *art*. I will not speak of the fact that the artistic creative power, which alone would be capable of supplying a motive in life, is denied to the vast majority of men, and that art can neither be taught nor learned.

Even the enjoyment of true art presupposes not only a certain talent, but also a by no means negligible schooling of our æsthetic perceptions. But even if we concede the possibility of educating large masses to the enjoyment of art, it still remains enjoyment only. Enjoyment, however, be it of the most noble, can never permanently supply a motive of life, unless, perhaps, one which is puny, self-seeking, and without value or power for an increasing development of the people.

The position is the same with the attempted solution by raising the standard of intellectual education. So long as men cannot translate insight into the world of things into deeds, even such an insight—and much less learning alone—cannot supply a worthy motive of life. There are individual men who are content to be satisfied for their whole lives with the growth of their insight into things, and who rise above their daily burden of monotonous work, because they find it possible to develop their views of life in their leisure hours, because the atmosphere of inner clearness suffices to make life worth living, and because they have learned to deprive themselves, if necessary, of everything except complete harmony with themselves. These modest beings were rare even in the time of the Greek philosophers, and modern conditions have not increased them.

Nor can the problem be solved by a living wage and regulated surroundings. Care of the outer man will certainly always play an important *rôle* in answering the question, and will for many—but certainly not for the best—make life bearable and even worth living; yet it will be an unsatisfactory answer for a considerable proportion of the people, because it leaves unsatisfied the demands of the soul.

Religion, art, science, bread, all four give only qualified, and by no means universally applicable, answers to the questions. The lion's share will, I think, be taken in all ages by religion, probably more so than to-day when once the churches decide (yet without falling into that blurred definition of religion which disclaims all positive knowledge) to attach more importance to the religion of deeds than to that of traditional formulæ.

But there is yet another way in which one may perhaps hope to solve the burning question: a way which has been loudly preached, but has not been put into practice in any large educational establishments. It is recognised in Fichte's small self-contained school-communities, which he once recommended for the reconstruction of national education; we can notice it, too, in good family education. What, next to deep religious conviction, can raise him who has sunk into the deepest misery? With what remedy can we help even the morally weak to a better life? What is the strongest educational factor in well-managed co-operative societies and trade unions? To these three different questions I make the same answer, "The care for others." It gives a content to life, it gives productive work. In our organisations, even in those rare schools where the scholar is taught systematically to act on his own initiative, the appeal is always made to the egoistic feelings of the child. He must advance himself mentally and materially, and the prospect of personal advantage from the cultivation of a boy's intellectual powers is the mainspring which drives our school machines to-day. What care have we given ourselves in arranging our schools that the children learn to be anxious and active for the

moral, intellectual, and material advancement of their fellows? There was once—more than a hundred years ago—a school in Schnepfenthal with a system which aimed, even though in an uncertain manner, towards that end; and a few years ago two were formed in Thuringia—two only in the whole of Germany. But these two have a clear recognition of the value of this system. In the elementary schools of Paris we find an institution which aims at education in this sense. These are the "Mutualités scolaires," or mutual savings banks, in which the pupils weekly set apart a few centimes in order to help the poorest of their comrades in case of illness, and in case of death to lighten the costs of burial for the parents.[1] In Dresden young girls of all social positions divide among themselves the duty of caring for, waiting upon, guiding, and supervising at their games thousands of elementary school children who are brought during the warm weather every Wednesday and Saturday from the town to the heath. Toynbee Hall is based to a great extent on voluntary mutual work, and no one can say how much light has been brought into the darkness of the poorest quarter of London by this means, while in many ordinary English schools care for the welfare of one's fellows is a recognised maxim of education. In the State of New York a "Reform-school" has been established (the "George Junior Republic") with a

[1] In the Commemoration volume published by the City of Paris in 1900 we read on page 203, where the schools are being dealt with: "La mutualité est la mise en pratique de cet axiome social que l'isolement dans la vie est un danger; que nos droits sont limités par des devoirs; que l'effort partagé devient plus facile et que rien ne nous sauve du découragement comme la pensée que notre douleur n'est pas indifférente aux autres."

constitution of a republican type in so far as all matters concerning the school are placed in the hands of the children themselves. They elect their officials who supervise, direct, and punish them, help in the construction, and undertake the management of the institution, whereas the teachers only interfere when things show signs of going wrong. And although it is a reformatory institution for the morally weak, this system is said to have shown excellent results.

These are, however, individual cases which only show that new methods can be found for increasing the feeling of solidarity and for securing the development of a real interest in the welfare of others, and not least a marked advancement in moral character. Have we already tried to develop in our various schools, and especially in our boarding-schools, the *morally* productive power of our scholars by some kind of mutual self-government, where the mentally and morally best could become the leaders of those morally weaker than themselves? Do we really still believe that the more suspiciously we grown-ups watch over the children the better we are fulfilling our educative duties? Do we realise how much productive power remains undeveloped even in those with a strong moral sense, so long as we continue to tie them to the apron-strings of our adult supervision? Have we not quite forgotten in our schools that, as experience always shows us, care for the mental and moral life of others has an educational effect upon ourselves?

Where has the idea of awakening a strong feeling of responsibility taken practical form? The inculcation of conscientiousness or of the feeling of duty must not be confused with the inculcation of *a sense of responsibility.*

A slave who merely carries out the orders of his master may be conscientious and true to his duty without having the least feeling of responsibility. Our modern well-regulated and uniform scholastic establishments with their well-defined marching routes for both teachers and scholars, with their fixed and highly detailed regulations and curricula, offer no scope for the development of this wonderful quality which is so rare and yet so indispensable for a nation which has to shape its own destiny. It can only grow under the rejuvenating breath of a certain freedom of initiative during the whole of the educative period. I am well aware that not all teachers or all children are capable of such a freedom, and also that in their feelings of anxiety or weakness many do not wish it. But in many cases it would bear wonderful fruit. It is in this respect that school authorities must open their eyes in order to see where the best powers may be developed. We need breathing space for teachers and breathing-space, too, for the pupil! It would sound almost like a fairy-tale had not the reporting adviser in the Prussian Ministry of Instruction, Dr. Matthias, given [1] so many excellent examples from the schools at Hanover, Dusseldorf, and Strasburg (West Prussia), all of which he warmly approved. This is sufficient to raise ones hopes. This freedom of action will not only foster creative ability: it will also arouse the sense of responsibility, especially if we resolve at the same time not only to encourage this freedom in the syllabus but also in those arrangements which have yet to be made for the building up of character and for the active partici-

[1] In his "Monatsschrift für höhere Schulen," 5th year. See Säemann, II, p. 50.

pation of the pupils in the mental, moral, and material interests of their fellows.

In the field of public education practically all the real work lies still before us. Only after we have succeeded in awakening people's minds to this religion of action shall we win one of the most powerful means of educating the masses, and this in its turn will only reach its full value when the colourless school of systematic teaching has made way for the hard school of life. He has a full life who may and can work for others—for his family, his friends, his fellow-workers, his fellow-citizens, his fellow-men—and who has learned to find his fortune thus from his youth upwards. The world was redeemed, not by knowledge, but by love; service, not mastery, satisfies the demands of the soul.

Both in the school and in life, those things which lead to a rational and practical devotion to others, those undertakings which strengthen the feeling of responsibility and solidarity, are bound to give a real motive in life; even to men who have not succeeded in finding it in their day's work.

They provide a field of creative work, which, however much we place it at the service of others, must also be of use to ourselves. For not only do we thus obtain—what we cannot otherwise obtain—a picture of mankind of which he, whose work keeps him away from contact with others and from caring either for their minds or bodies, can know but little, but it also brings us very tangible benefits, because everything which, with good intentions, we undertake together with others also fosters our own welfare. The wisdom of this can be neither taught nor learned, it can only be experienced.

Carlyle undoubtedly had in mind this application of productive work to the needs of our fellow-men, as well as in the service of religion, art, and science, when he declared it to be the latest gospel of this world. And to it we may apply the last lines of the Ode which Ernst von Wildenbruch wrote in praise of the monument, "Labour," by the Belgian sculptor Meunier:

"Schaffende Arbeit ist Weltengebot,
ist Erlösung durch Qual und Not.
Schaffet und wirket!
Schweigend dem Werke sich weihen und geben,
heisst im Gebet seine Seele erheben.
Lautloses Suchen stummen Gebets,
er, der alles versteht, er versteht's.
Sucht ihn im Schaffen!"

CHAPTER IV

THE EXTENSION OF THE ELEMENTARY SCHOOL[1]

EVERY organism in the course of time develops within itself parts which are necessary for the preservation of its kind and exactly suited to its function in life. When this does not happen, the organism in an earlier or later generation ceases to exist.

States and communities may be regarded as organisms. They are the form of human society, rooted in the character of human nature. We need not here discuss the causes which have led to their formation during the course of ages; it is sufficient for us that they are necessary forms, and that, as far as history will carry us back, they show a continuous process of change which I am convinced has been in a forward direction.

The modern State is a different organism from that of a hundred years ago, and, in my opinion, a better one. It is not the perfect constitutional State, but we are approaching that State. Those things which were unknown to the States of antiquity and the middle ages: the free determination of his own destiny by each individual, complete freedom of conscience, civic and

[1] Lecture delivered at Hamburg in 1905.

political liberty, equality of rights, etc., are characteristics of the modern State, even though they may occasionally be somewhat obscured. Similarly, the State also, consciously or unconsciously, develops organs within itself which serve for the preservation of its kind, and to this it is forced either by its own constitution or by other similar States. If it does not wish to fall, or to succumb to a more powerful State, it must keep those organs continually new and adapted to its actual stage of development. This is an elementary truth.

Among these parts necessary for the preservation of the State is one which interests us particularly—the educational system; and especially the section of it which deals with the masses—compulsory elementary schools. It is one of the newest organs which the State organism has developed for its own preservation; it is less than 100 years old. There were, of course, elementary schools much earlier—one may perhaps say in the time of Charles the Great—but they were not developments of the State organism, but, in the first instances, establishments of the Church—not of a national, but of a universal Church—and served nobody except the Church. They belonged to the towns, yet did not serve the town community but the Church, or humanism, or some other ideal. Finally they were private establishments and were, with few exceptions, the source of income of the masters.

Not until the middle of the eighteenth century, at the time when Rousseau's "Emile" was stirring men's minds, was the idea entertained of introducing State schools for the good of the State as a whole. The honour of this belongs to the German princes above all other rulers in the world.

On the 12th of August, 1766, King Frederick II. of Prussia issued a Rescript in the form of "General Regulations for the National Schools of the whole Monarchy," which had been prepared by Hecker, and whose object was set forth as follows: "that the ignorance which is so pernicious in itself and so prejudicial to Christianity may be prevented and redressed, in order that in time to come the schools may train and educate subjects better and more skilled."

On the 18th of September, 1770, Maximilian of Bavaria gave his sanction to the "General Regulations for the German Schools," which were drawn up by Braun.

On the 6th of December, 1774, "General Regulations for Schools" appeared, prepared by the Abbot Felbiger, and approved by the Austrian Empress Maria Theresa: they required the establishment of private schools in all parishes.

Some decades later school compulsion was also introduced in Austria, Bavaria, and Prussia.

At that time, however, the States had no constitution. The princes were absolute rulers, and the schools had neither openly nor tacitly the function of bringing up a free and self-dependent bourgeoisie, but existed, as Rotenhan, the counsellor of the Emperor Francis (1805), so charmingly expressed it, "to make tractable men of the working classes."

When the States got their constitutions they had already a national school system, and, although this had been drawn up for a quite different kind of State, the fundamental regulations, framed when the idea of the national school first appeared, are nevertheless authorita-

tive even to-day for this "preservative" of the organism. We have adapted our measures of defence and offence to the new functions of the State; and in our tariff and our transport policy we have followed the streams of trade and kept pace with the times. We have made the necessary concessions to rising industrial States; we have drafted for the awakening masses of wage-earners an insurance law of which the whole world is envious. Our modern State has adapted itself to all these things, and its measures have been insufficient in one case only—that of the national school.

When the State created the compulsory school, it was a moderately populated agrarian State; a State without responsibility to its citizens, with sharply-marked divisions between professions and classes, with a traditional life; a State in which a child, especially a child of the masses, was prepared for its rights and duties as a citizen only to the extent which its training in the family circle for the trade of its father allowed. Nevertheless, a six or seven years' attendance at school, and instruction in reading, writing, arithmetic, religion, and general knowledge, was not without its importance for such a State. For such a State, too, Rotenhan's prescription might still be of use: "that the masses should only be allowed such ideas as will not interfere with their work or make them dissatisfied with their station." To-day we are faced with the over-populated industrial State, which lays great responsibilities on its citizens to whom almost the entire welfare of the State organism is entrusted, both in local administration and in matters affecting the National Constitution; to-day the customs of class and profession have no longer an educational value; a newly-liberated individualism

seeks to deny all tradition, and almost half the new generation is neither brought up in the discipline of a well-ordered family-life nor introduced to the duties and rights of citizenship through the adoption of the trade of the father. Everything else has changed, but public education in the elementary schools and the higher schools has remained where it was.

For, to add one or two years at either end of these schools, to introduce a few more subjects, to reduce the number which may be present in one class from 100 to 80, and to erect continuation schools with insufficient and inconvenient hours, and an utilitarian syllabus, is not a reform adapted to the needs of the age.

In the past century several wise educational authorities came near the true goal of the national school, but their well-thought-out plans were never carried into effect. In 1803, there appeared in Bavaria a rescript of the General Directorate of Education, permeated by the spirit of Pestalozzi. "All public educational establishments," one reads, "must be such as to render it possible for a man to realise his true function. And this function," it continues, "is a double one—a general and a particular. The general is morality as such, the particular, usefulness, which means that a member of a society must be put in a position to do his utmost, both for himself and for the society in which he lives (the State, the community, and the family). With the schools in which the child receives definite instruction must be combined schools for the encouragement of self-activity through manual work. Even those children who will not need to work for their living in later life are not to be excluded, for, apart from the vagaries of fortune which cause many

to lose the possessions they have inherited, it is always a good thing that each individual should learn to appreciate the advantage of being able to make his own living and to respect those who have been able to make a position for themselves through industry and perseverance." Fifty years later the Emperor of Austria approved the programme of Feuchtersleben, where we read: "Where the whole nation is entitled to participate in the making of laws, no exertion and no sacrifice should be spared to give to all an education without which every privilege would be a contradiction."

The spirit was willing, but the flesh was weak. The knowledge of the end was there, but the importance of the means was not understood.

To-day the problem of the public education of the masses is knocking at the doors of the school with elemental force. There are many ways of solving it, and there is no lack of *advisers, official and self-appointed.*

We will examine one of these ways which will, I hope, lead us slowly but surely to our goal, provided that we find a sincere and sensible spirit in the proper quarters.

The public measures of instruction and education in a modern State and a modern community, as we have proved from the foregoing observations, can have only one goal—education for citizenship. Even the secondary schools and the universities are not exceptions, for it is even more necessary for them to keep this end before their eyes than for the elementary schools. To-day more than ever, these higher schools are emphasising only one side of the future citizen, the learned or artistic; in other words the professional or

egoistic side. And yet we all know that a man can be an excellent savant, artist, technician, or business man and yet fail entirely as a citizen. A good citizen is a man who recognises not only his own duties, but those of his country and possesses the strength and the will to *live in the service of both*. It would be very interesting to show how the higher schools and the universities could do more towards the fulfilling of this double duty than than they do to-day, but I must restrict myself to those schools which, to 90 per cent. of our whole population, are the only source of education provided by the State —the elementary schools.

How can, and how must, these schools be developed so as to fulfil their duty of accomplishing, as far as possible, the civic education of the masses? What characteristics must they have in order to do justice to this one demand?

From the conception of a modern State there follows the equality of rights on the part of all citizens. Every public institution which serves the good of the community must be open to every citizen in the same degree. Two kinds of elementary schools erected at the public expense would presuppose that there were two kinds of citizens in the State. From this follows one fundamental principle—*The elementary school must be the same for all children.* The intelligent son of the poor artisan will have the same public rights and duties as the intelligent son of the rich business man. If the State gives him the same education he will be of greater service to the commonwealth than some weak-minded scion of an aristocratic or wealthy line whose only privileges are those of birth or money.

It does not necessarily follow from the equality of

right to the best elementary school education that this right should be free to all. But it is obvious that the claim to a right would only be illusory if the cost of its exercise could not be met by all; and from this follows a second fundamental principle: In so far as the State, or the community representing the State, cannot, or from educational motives, will not, voluntarily secure free teaching and materials to all, *it must at least make provision to secure it to the poor*; in the elementary schools to all, and in the higher schools to the more talented.

From the equality of rights for all follows the equality of duties for all; every citizen is obliged, as far as lies within his power, to provide for his children that education which is indispensable in the interests of the State. Hence our third principle: The school which provides the *minimum* of civic education for all is *a compulsory school for all.* It must, however, be open to everyone to do more for the education of his children than this minimum lays down, for the right to education is a right of the family as well as a duty of the family. The civic right only comes into play where the family right cannot be, or is not sufficiently, exercised. He who wants to educate his children privately, whether alone or with others, must in general be allowed to do so, but he must bear the cost himself and be prepared to submit himself to strict supervision on the part of the State. No bourgeoisie insists more strongly than the English and American on this right, and we consequently find that even to-day, in spite of the compulsory principle, they have a flourishing system of private teaching and private schools with no State inspection worth mentioning. The future however will

undoubtedly bring even these States into line with us; this is shown by the Education Act of 1902 in England and confirmed by the Continuation School Law of 1908 in Scotland.

Freedom of conscience, the highest human right, ranks with this equality as a fundamental claim of the modern State. Like all other liberties it must only be restricted where the State as a whole could suffer from its exercise. The moral man, above all others, can endure anything rather than the suppression of his own innermost convictions. It is a divine and universal right, and the best of us ever recognise it as such.

From its recognition there follows the fourth and last fundamental principle: The general and compulsory elementary school must always *make allowance for freedom of conscience.* Since, however, the question of freedom of conscience is nowhere more difficult than in religious questions, the school must do justice to all confessions. In England, one of the most religious countries, religious instruction in the elementary schools has been made optional in order that no child of the numerous nonconformist sects may have its religion—or that of its parents—interfered with in any way. This policy is the only right one where a number of confessions are equally distributed over a country, and where the religious life of the family is strong enough to give firm guidance to all those children who without such an influence on their will would come to moral ruin. In England both these factors are to be found. In its Schools Law of 1883, France excluded all confessional religious instruction from its schools, perhaps without this step being either necessary or even useful for the State. In Germany,

the Socialists are making the same demand; the Liberals, on the other hand, ask for schools with separate religious instruction in the different creeds; while the other parties demand denominational schools. The decision of these matters depends—apart from the fundamental claims which we have just considered—on the answer to the question whether we must regard religion as a useful or even necessary instrument of education or not.

This question brings us to a second group of claims in the extension of the public elementary school: Those which relate to ways, means, and methods.

The public elementary school has become an organ of the civic body which the latter has developed for its own preservation. As former factors in the evolution of education disappear or lose their force (the discipline of the restricted circle of family, trade, or class) the school has to take over their functions, or at least to supplement them. We saw that the good citizen must recognise both his own duty and that of his country, and must possess the will and the power to live in the service of both. We may therefore formulate the object to be kept in view under four definite heads: Insight into the duties of his profession; insight into the duties of the State; the will to act according to his understanding of these things; and the physical and mental power to put his will into action. Such insight or understanding is the result not of information but of true knowledge. A hundred years ago, when the general elementary school first came into existence, it was expected under favourable conditions to spread "useful knowledge," and as the great tree of wisdom grew with wonderful rapidity, more and more fruit was

plucked from it to feed the elementary school. Under this treatment the latter put on flesh; one may almost say that it became inflated, for it was certainly rather puffed up than strengthened. We have realised to-day that this way of extending the elementary school was the wrong one. In order to spread knowledge, in order to learn to understand the world around us, the national school must learn above all things to restrict itself to a minimum of teaching matter. Only he has been properly "taught," and prepared for all the duties which later life will impose on him, who has learned few things, but learned them with care, thoroughness, thoughtful observation and firm self-control; and who has experienced the joy and satisfaction of successful labour. The way in which the elementary school may meet this fifth requirement—the reduction in the amount of subject-matter—depends more than might appear at first sight on local conditions.

Hamburg, with its commercial acceptations, will not here take the same path as Munich, with its industrial art, nor the town schools the same as schools in the country. The extent of the restriction will be dictated by the professions which the children will enter later. The schools of an elementary or higher grade have to lay the general foundation for the activities of later life. This foundation need not therefore be of a vocational character.

One kind of knowledge cannot, however, be gained in the elementary schools of to-day: the insight into the duties of the State. Neither the stage of development of the average fourteen-year-old child, nor the stock of experience upon which the teacher can work, allows of its attainment.

The only thing that we can do here is to give through the medium of suitable geography and history lessons, some idea of the dangers, struggles, and achievements of his country in the spheres of commerce, transport, social welfare, and defensive preparations. So far, at any rate, the age of the child—especially in the large towns—offers no obstacle, and its surroundings further afford tangible and visible examples. But the greatest questions of modern culture can form no ground for instruction in the elementary compulsory school. I refer here to art, science, religion, the relations of the various classes and occupations to one another and to the community as a whole, the development of constitutional problems, and the defence against those dangers which everyone who casts his vote into the ballot box should recognise, at least in their broadest forms. And yet the modern State is obliged in its own interests to educate every voter in these things, at least, as far as his mental capacity will permit. There are, as a matter of fact, some States and towns which introduce a part, at least, of this matter into the curriculum of the national schools. In its National School Law of 1889 Norway insists on "knowledge of social forms and relations.' As far back as 1866 the Finnish law required instruction in the constitution and forms of society, "in order to enable the children later on to take an intelligent share in the public life of the community and the State." Copenhagen—which has a system of schools different from that of the rest of Denmark—requires the teaching of history to include, not only a knowledge of the government of the country and its chief statesmen, but also an insight into the condition of the

peasants, agricultural reform, the movements of the last century towards freedom and their influence on national conditions, the constitution of the State and its administration. The French law of 1883 requires instruction to be given in the rights and duties of citizenship. I am, however, convinced that these endeavours cannot bear any real fruit in an elementary school which dismisses its pupils at the age of fourteen. They belong to the extended school of which we shall speak later.

Where, however, the ordinary instruction is supplemented by work based on the principle of self-activity the elementary schools can assume the duty of preparing the human mind for nobler forms of enjoyment. Not only does the *individual* suffer if, after performing some mechanical operation from morning till evening, he does not know how to occupy his leisure time in anything of more worth than the mere satisfaction of his animal needs, but the State suffers also if it leaves its destiny in the hands of such beings, whose qualities are only those of the machine or the animal. Education in the pleasures of life is no less necessary than in the work of life. The animal can work and eat its full; man alone can find solace in the Arts. If we teach a man to listen with understanding to good music we take away his desire merely to gratify the flesh, we raise the tone of his life, we open out to him the broad realisation of the cultural duties of the State, and increase, not only the intellectual, but also the economic treasures of the State. For the pleasures of Apollo and the Muses are not only incomparably higher than those of Bacchus and Venus, they are incomparably cheaper!

It will always remain to the credit of Hamburg that she early tried to put into practice this sixth claim which we must make in the extension of the national school and national education, and which even now is not always properly understood. We shall certainly have to work for many decades more in order to direct this æsthetic education into the right channels. For æsthetic education is not yet moral education; and it can even be a hindrance to moral education. It may, however, be guided into the service of moral education; that is to say, *through conscientious productive work.* In his "Book for Boys and Girls,"[1] Professor Förster of Munich relates a charming tale entitled "How to learn to dust." In it he shows how even such an apparently unlikely occupation, if rightly practised, may further our moral and æsthetic education. Every teacher knows, too, that careful writing is a valuable æsthetic and moral educative factor in the elementary school. The educative power of any work which is done conscientiously and with thoroughness must obviously increase in proportion as the quality of the work improves. The modern elementary school—which is so fond of regarding itself as an educative school—has hitherto paid no attention to productive work, even in Bavaria, in spite of the excellent Rescript of 1803; and this is precisely where such work could have been had for the asking, namely, in bringing out fluency of expression in drawing and in languages. Languages and drawing can only be of educative value where they strive unreservedly for conscientious and characteristic expression of the thoughts or graphic conceptions. This struggle furthers moral education, and the dis-

[1] "Lebenskunde für Knaben und Mädchen."

covery of the right mode of expression furthers æsthetic education. To-day, however, languages and drawing, almost without exception, work in quite another direction in our elementary and secondary schools. The necessity for the partial replacement in our schools of book-work by manual work is gradually being realised, but only in the face of the opposition of hundreds of thousands. Here and there workshops and school kitchens are being introduced, and not out of utilitarian motives, but because nothing furthers our intelligence and our character more than daily work, carried out conscientiously and at the expense of our own personal desires. We know to-day, or it is full time we knew, that the learning by heart of biblical phrases and catechisms, the laying of emphasis on rules of health, the remembering of historic dates, battles, and dynasties do not of themselves produce piety, hygiene, and patriotism respectively; and that, on the other hand, the skilled worker who has grown up in his work is to a great extent an aristocrat in comparison with the unskilled, although they may both have been impregnated with the same book-knowledge at school. Above all we know, too, that our modern schools do practically nothing towards social education, and that for this there is no better instrument than the organisation of the school of manual work on the principle of the community of labour.

Not everybody is suited for productive labour any more than everybody is capable of learning by heart: the one requires the power to observe and correlate, the other requires memory. Only the fit can be educated by work; those only who, through struggling with inner difficulties, attain ever new and ever nobler results.

The unguided struggle against oneself is discouraging, even demoralising. Self-education is impossible here. On the other hand, education with the help of others can be of real service if the man is not to remain what he would be without any education—an animal which only the police and the hand of the law can make tolerable as a citizen. Custom and authority, moreover, themselves serve the cause of such education, for all education is from its nature through others. The child cannot be its own moral lawgiver, and a sensible system of education can only gradually, and with the assistance of a certain definite talent, arouse respect for the moral code in the human heart. All work—even mechanical work, so long as it is regularly and carefully practised—serves to inculcate the elementary civic virtues. Authority may help at its side in the case of the mentally and morally weaker natures; not human authority whose weaknesses cannot escape even the fool in the long run, but one which is rooted in the deep essence of our mental nature, which we can neither prove nor disprove, but which such men as Kant and Goethe sought during their whole lives—an authority, in short, which creates of itself in the majority of mankind the yearning for religion, which strengthens the weak-willed and raises up him who is crushed down by earthly sorrows. We know, unfortunately, that abuses are found in connection with religious education as with every other. Since, however, only a very small fraction of mankind can recognise Kant's categorical imperative, since moral and æsthetic education through productive work presupposes a very considerable talent, and since the morally and intellectually-untalented are not less numerous than the

talented, the State has a material interest in religious moral education. From this point of view religion is not a private matter but one of public import. If, then, this is so—and I think I have made the proof clear—then religious instruction, whether it be in the current religion or not, is not only a useful educational instrument but also a necessary one.

In this matter the need of the State is at one with the objects and duties of the religious bodies, whose chief function lies in the moral training which they give. Only from this point of view can the State be justified in combining religious instruction with compulsory attendance in its public educational establishments. The combination must, however, only take place where due regard is paid to that fundamental characteristic of the modern State, freedom of conscience; and it is owing to this that we are faced with those difficulties in the organisation of the elementary school and of so many other State institutions, whose only solution is mutual compromise. A compulsory undenominational State school would be just as much opposed to freedom of conscience as a compulsory denominational school. Here we must widen our organisation until it provides for the entire separation of religious from secular instruction.

The demand for ability and usefulness in the individuals who compose society calls for an organisation of the national school which shall also include hygiene in the curriculum. Hygiene may be served as much through the raising of the standard of general education—particularly in the natural sciences—and the strengthening of the social sense, as through accustoming the body to a rational mode of life

by frequent bodily exercises of all kinds. These last, in connection with instruction in manual labour, form one of the best means of strengthening and training the will without which even the greatest intellect can accomplish nothing. There was a time—and it is not so very far back—when this question of civic education was not even thought of, still less undertaken seriously. To-day it is so obvious that one realises with amazement that States and communities can still occupy themselves with illusions on this score, and prefer to lay out large sums on sanatoria, hospitals, and infirmaries, the upbringing of the poor, the oppressed and the orphaned, which cost thrice the amount they thought to save on education. Here, perhaps, a simple calculation of the highly wasteful loss of capital and energy occasioned by the premature sickness and unexpected deaths among our numerous hygienically uneducated fellow-citizens would serve to open the eyes and the purses of our keen city fathers and parliamentarians more effectively than all the theoretical proofs which could be advanced, but which I do not intend to discuss here.

We have now deduced from the fundamental characteristic of the modern State four primary demands, and, from the consideration of the chief aims of all education, four secondary ones, to which every form of national elementary school must do justice. A final group of demands regarding the systematisation and extension of the elementary school arise from the needs of the child himself, that is, from those physical and mental qualities in the young which lead them to the choice of a definite career.

I must here again remind you of the essence of civic

education: the acquisition of an insight into the duties arising from a man's station in life and the needs of his country, and the schooling of the will and energies to live up to those duties. It is more or less immaterial what means of instruction we use. He who has learned to think and, through self-conquest, to control his will in one sphere is able to do it in another. Considerations of economy in our educational endeavours, no less than the nature of all true education, force us at an early period to make vocational training our general issue, and I have dealt with this in another chapter. We are thus compelled to make a division in public educational institutions from the moment when a consideration of the future career demands new elements in education. Moreover, the aims of education which are recognised as necessary are not all attainable at every age, and this leads us to a corresponding *extension* of the school.

The elementary schools which concern themselves with the elements of education necessary for all vocations are the same for all normal children irrespective of class or fortune. In our present system these schools take children up to their tenth year and then divide them into two principal groups. Those who intend to enter professions requiring a scientific preparation go on to the higher schools, the rest remain at the elementary school. It is very remarkable that so far nobody has attempted a scientific inquiry into the wisdom of choosing this particular age, for it can only be justified if a proof is forthcoming that this year of life is in general the one at which the child attains the maturity requisite for the more strictly scientific treatment of a given subject. From many years of

personal experience I know, for instance, that the capacity for and sense of strict mathematical proof—without which mathematics is useless—is generally only developed in the fourteenth or fifteenth year. Even this age is in general not sufficiently advanced for independent physical investigations with the corresponding necessity for thorough consideration of causal connection. We are continually deceiving ourselves as to the real capacity of the child because we are too fond of giving him knowledge rather than letting him work things out for himself. Even instruction in modern languages need not begin too early, for the educational influence of language also depends on the possibility of educating the requisite paths of association in the brain, and these can still be formed in the adolescent, as indeed also in the adult. In the tenth year the maturity necessary for the grammatical practice of Latin is hardly attained, otherwise 90 per cent. of the children in Munich who go on to the higher classical schools would not choose to leave the elementary schools in their eleventh year when they are free to do so in their tenth. However this may be we must deal to-day with things as they are, and let those who are to enter the learned professions go the way which stands open at present. At the most we can only express the wish that the higher schools, if they are really to offer specialised training, should organise in three groups and so do more justice to the three chief talents of man in the intellectual sphere; the historico-linguistic, the technico-scientific, and the artistic. This is more fully elaborated in Chapter XI.

We thus see that the great masses still remain after the tenth year at the elementary school which in

accordance with the industrial enactments and in fulfilment of its educational task has to keep the children another four years, and what is more important, in four graduated classes. A combination of two or more years in one class as was the practice in Berlin a decade ago may be forgiven in the case of a poor country community, but never in a town which has always at its disposal the requisite number of children for a particular class. In South Germany and in Austria it is required, either by law or by local ordinance as the case may be, that, where the number of scholars permits, as many classes must be formed as there are compulsory years of attendance.

At the end of their fourteenth year the scholars of the four upper classes enter either purely manual occupations, or mercantile, industrial, and technical employment which calls for a further preparatory mental training. It was at one time thought necessary to erect for this purpose special middle-class schools or higher elementary schools, and consequently to make another division of the schools at the age of eleven. There is little to be said against this so long as every child either goes to these schools free or only pays a small sum in each case and can choose either as he wishes. Since, however, most of the purely manual trades employing skilled artisans require precisely the same talent and previous training as the so-called middle-class occupations, I consider such a division useless. In Bavaria the Government and the teachers have remained as yet so true to the general elementary school that public advanced schools for boys are out of the question. Still it would not do to be too optimistic. If the standard of education is to be raised it must be

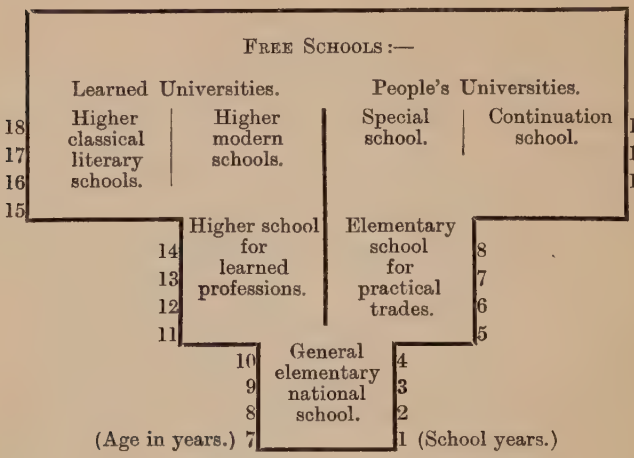
raised for all alike, and if we are to make our advanced elementary school more attractive by giving it another name, the parents may be allowed this childish satisfaction. Many Austrian towns have adopted this plan and given all their elementary schools an extended curriculum during the last three school years together with the more attractive title. Whether the extended curriculum has made for the advancement of popular education is of course another matter.

At the end of the fourteenth year, then, the public education of the majority of our people ceases. The children are cast out into the world in a state of entire immaturity—especially those who have no family on which they may fall back. The sons of the richer families, on the other hand, have for another four or five years the advantage of the influence of a higher school. I regard that as one of the greatest contradictions of the educational policy of the modern State. It is impossible to understand why the State should leave those who are least protected mentally and morally to the chance of being educated through workaday life, rather than the small group of those who are intellectually talented and who are generally able to grow up in the calm of a well-ordered family life.

This policy can only widen the gulf between citizens who should enjoy equal rights, and to such an extent that the two classes which are, after all, mutually interdependent cease later on even to understand one another. The further extension of the elementary school up to the eighteenth year is consequently an indispensable necessity. The more intelligent of the

Swiss Cantons have through the simple means of the referendum extended compulsory school attendance to the age of fifteen or sixteen. Other States like France have supplemented the ordinary curriculum by extended courses, the well-known "cours complémentaires," or special trade schools, and the "écoles supérieures." We cannot, however, adopt precisely this course, for it by no means includes all those capable of education, or even all those desirous of education. The method of extending the period of compulsory attendance is not economical enough either in its material or its intellectual aspects, for boys and girls alike are in general at the age of fourteen ripe for manual work, and can by that age have gained the necessary preparatory education, provided that education is not confused with the "cramming" of knowledge. All further education, especially in civics and that which aims at inculcating the higher social qualities, can with an incomparably greater measure of success be combined with vocational education.

Consequently the last claim, and by no means the least, for the expansion of the elementary school is its extension to the end of the eighteenth year, either through compulsory continuation schools or through special trade schools. Here, in touch with practical occupation which brings the scholar more and more into contact with the questions of practical life, is the place to continue civic education with some measure of success by discussing current problems, creating opportunities for the practical employment of a healthy altruism, and arranging for mutual work in the services of others.



Thus after the eighteenth year the doors of free schools still stand open for all boys and girls of the learned and unlearned class: the universities and technical high schools for the higher professions, the higher trade schools and the people's universities for those entering the lower and intermediate professions, so that every one may find a ladder on which he can climb as high as his talents will allow him.

These free schools are already in existence; what they lack is further expansion and right utilisation for the last stage of all education; since, apart perhaps from the people's universities, all the other free schools are only used by those attending them for the selfish end of their own professional advancement.

I have made no claim for the expansion of the elementary school which has not already been raised by others; my duty was only to deduce out of our conception of the modern State certain adequate and necessary requirements, and, on the other hand, to

reject the superfluous and the Utopian. The development of the elementary school system in Munich will perhaps be sufficient to demonstrate the fact that expansion in the way I suggest is possible.[1]

The system of educational institutions which Munich has created in the last ten years through the introduction of kindergartens, elementary schools, continuation schools, and special trade schools for the education of the masses, is one which may justly be described as capable of being directed into the service of civic education; but I am convinced that it will not meet with approval in all quarters, and certainly not in every detail. We need only remember the criticism levelled at our new curricula. There were those who praised what we had done and held it out as an example; there were others who said it did not go far enough; while others again called it wild and even a sin against the children, and wanted to put those responsible for the scheme in the pillory as a crew of educational lunatics. Then there were the countless resolutions passed in order to preserve to the elementary school its so called "general education"; the fierce battle raged between denominational and undenominational schools; the oceans of ink spilt in the dispute about the Mannheim school system; and the excitement roused by Ries' brochure, "The Danger of the General Elementary School."[2] I found that Ries had much to say that was pertinent but at the same time missed the most important point at issue, namely, the strict proof that his national school, purged of the children of the upper ten thousand, would really prevent the desertion of the highest classes to the happy land of "learned" schools.

[1] See Appendix I. [2] "Die allgemeine Volksschule eine Gefahr."

I cannot regret the fight which raged around the questions of the elementary school. In Russia there is peace, and the same applies to Spain and the Congo :— but we will not envy them their peace. It is only to be regretted that the struggle should develop into a personal one, and the pedagogical and political parties have done their best to make it such. One part of the fight should however unite all parties, the fight against book-learning and against intellectualism. I hold the latter to be the most dangerous enemy of all civic education, and one which is already deeply rooted in other kinds of schools. A hundred years ago Goethe and Fichte were fighting against it, Goethe in "Wilhelm Meister" and Fichte in his "Addresses to the German Nation." Neither the Educational Province of Goethe nor the more restricted Industrial Communities of Fichte can be put into practice. But we can learn from their noble ideals. They should be for all time engraved on the banner under which we fight and wish to conquer, to conquer not for ourselves, but for those who follow us, for our fatherland which we love, in which we believe, from which we hope so much. When our children read the glorious history of our unity may it not be said: "Led by a powerful statesman they laid the foundations of a great nation through blood and iron, but were not able to become a great nation," but rather: "We thank you, fathers and mothers, teachers and priests, statesmen and senators, princes and parliaments, that you not only gave freedom to the people, but *have educated them, and taught them how to use their liberty.*"

CHAPTER V

THE SCHOOL OF THE FUTURE A SCHOOL OF MANUAL WORK

A CENTURY has passed since the untiring zeal and devotion of Pestalozzi gave to our elementary schools those principles of educational method which will govern them for all time. He endeavoured "to find the laws which must direct the development of the human mind in virtue of its nature." He was aware that these laws must be the same as those of the senses and of the physical being, and he was convinced [1] "that in them could be found the thread from which could be woven a general psychological law of teaching." He found the absolute foundation of all knowledge in the recognition of observation: that was his great achievement.

Then came men who built on this foundation. They built with the stones of past ages after the method which Pestalozzi had discovered. The learning-school of the middle ages became the learning-school of modern times. But meanwhile the *mind of the child* has become more and more the object of patient study,

[1] Speech at the Pestalozzi commemoration, Jan. 12, 1908, in St. Peter's, Zürich.

and it has been brought home to us more clearly than ever before that the method of passive observation does not by any means meet the needs of the mental life of the child. We have learnt, too, that creative activities of sometimes wonderful force are concealed in the child. The pure principle of Pestalozzi, the principle of self-activity, became a catch-word. The high-sounding claim of the "educational school" made its appearance; and those who, in the manner of Ziller, thought they could thus form the character, called themselves the scientific educationists. And yet, when you enter the class-rooms of such teachers, you find in general the same style of work as with the supporters of the old passive observation lesson; you find everywhere the old learning-school—or, as it might better be called, the old book school.[1] It will perhaps be objected that the task of the school is precisely that of making children at home in certain fields of knowledge, that of helping the child to complete, systematise, and extend his knowledge, and use it independently for whatever purpose: it must therefore be a school for "learning" or it is no school at all. Granted. But it must take account of the whole life of the child, not only of its

[1] Pestalozzi himself was very mistrustful of all book knowledge, and still more mistrustful was his assistant and pupil, Josef Neef, who from 1800 to 1803 lived with him in Burgdorf. Neef was later invited to Philadelphia by Maclure, and there he founded a school which after a hundred years still strikes us as modern, and often recalls the German schools in Thuringia. In the "History of the Pestalozzian Movement in the United States" (Syracuse, N.S., C. W. Baardeen), by William S. Monroe, 1907, an extract is given from his chief work: "Sketch of a plan and a method of education." Amongst other admirable passages it contains the classic sentence: "Books shall be the last fountain from which we shall endeavour to draw our knowledge."

passive, but also its *active* nature; not only of its intellectual, but also of its *social* powers. It must be a school where learning is not only learning from words and from books, but also from practical experience.

Yet, when we test the school of to-day from this point of view, we find that they let the *productive* capacity of the child die out rather than develop it; that they often endeavour to mould faculties, *e.g.*, the intellectual, at a time when they are quite unripe for such treatment; that they unite learning with things for which an interest must first be artificially awakened by refined methods while only occasionally making use of the experience which the child brings with it to school; and that, at any rate, as far as the official curriculum is concerned, they provide practically no nourishment whatever for the child's social nature.

Realising this, many of us feel that the present school needs some internal change of a radical nature. And it is not only we in Europe, which they say is growing old and where the school has had to develop under the burden of the traditions of centuries, who feel the necessity of this thorough reform, but the best educators in the New World agree with us here. Professor John Dewey, the well-known philosopher of Columbia University, rightly complains that the schools both of the old and new world are adapted almost exclusively for passive listening.

"Just as the biologist can take a bone or two and reconstruct the whole animal, so, if we put before the mind's eye the ordinary schoolroom, with its rows of ugly desks placed in geometrical order, crowded together so that there shall be as little moving room as possible, desks almost of the same size with just space enough to

hold books, pencils, and papers and add a table, some chairs, the bare walls, and possibly a few pictures, we can reconstruct the only educational activity that can possibly go on in such a place. *It is all made for listening.*"

But the boy and girl between the ages of six and fourteen, as in early childhood, are made not only for the passive reception of the knowledge of others. All these years are rather years of ceaseless spontaneous activity, whereby human nature is working, producing, experimenting, experiencing, seeing what things are made of, and continually learning through the medium of reality itself. The whole of the restless play of childhood is a process directly organised by nature to increase the mental and physical forces under the influence of living experience of every kind. Where healthy children are not imprisoned within the funereal walls of great towns they are full of initiative. They are ever discovering new fields for their activity and enjoyment and continue in oblivion of the world the pursuits that have attracted them. No one has better described this feature of childhood than the Swiss poet, Gottfried Keller, in his novel "Der Grüne Heinrich."

Ninety out of every hundred children far prefer every practical occupation to quiet abstract thought and reflection, in spite of our book education. The proverb, "Practice is better than precept," fits here exactly. Only where other people's knowledge is of service to them in something they are intent on doing, will they open their ears gladly and devour books other than story books. For work in workshop and kitchen, in garden and field, in stable and fishing boat,

they are always ready; and here their work is most fruitful. Here are the thousands of things which their growing intelligence seizes on with joy; here are developed hundreds of kinds of skill which the unconscious muscular sense acquires; here they learn to feel in their own actions the warmth and reality of social life. Here, too, they experience those personal relations which social life develops, the mutual interdependence of small and great; learn to help friend and stranger alike, and, as in their games, to strive and to organise with their fellows and to subordinate themselves of their own free will.

But the busy-bodies persist. The school opens its doors, and an end is made of all the occupations which affect the whole child—the reality of the house, the workshop, the kitchen, the stable, the garden, the fields; all digging, all building, all construction, and all production. An end is made of the whole world of the child. A new, strange world, with hundreds of riddles and unintelligible demands and objects is put before him. Instead of the sand-castles, the bricks, the scissors, the hammer, the whip—slates, pencils, alphabets, rulers; instead of jolly prattle and story-telling—silence and listening; instead of freedom for the fancy to wander through the whole visible world—attention and rigid control of the intellect; instead of discovery, experiment, and making things—imitation; instead of a joyful tumble in street and alley—sitting quiet and keeping still; instead of common adventure under some chosen leader—a solitary task prescribed in advance; instead of helping some weak comrade—guarding your work to prevent his cribbing. It is hardly surprising that children get frightened and lose

their heads, that they hide their real feelings instead of expressing them freely, that their thoughts wander beyond the walls of the class-room in spite of all good will, all warning, and all punishments.

Happily some kind teacher is generally caring for them, helping them, smoothing over their difficulties, and allaying their fears; and the millstone of systematic method grinds the hard grains of unwelcome knowledge till even the weakest can swallow the new food. Gradually most of them get accustomed to the process of being shipped twice daily from the *terra firma* of their ordinary experience to the unaccustomed island of knowledge to which they are unable to build a real bridge. They get accustomed to the method of work, and even begin to love it. Instead of dealing with real things they learn to hold converse with their shadows.

In place of the world of experience, book-knowledge, with the honours that the school bestows upon it, commands their esteem. Instead of the former love for enterprise and adventure, there comes patient work in the beaten track; instead of observation, enquiry and doubt comes complete dependence on the words of the teacher. I must, however, be just, and not pass over the advantages of the school of to-day, which makes children get accustomed to work they dislike at first, and impresses them with its order and uncompromising seriousness. It can, indeed, bring out certain fundamental and indispensable qualities, such as accuracy, conscientiousness, carefulness, endurance, orderliness, regularity, and self-control. But it must be admitted that just these moral advantages are most obvious when the school does not merely conform to

the inclinations of the scholar,[1] provided always that it is guided by a human and sympathetic teacher. The defect of the modern school is really that it fail to bring out certain active qualities in the child and stunts rather than fosters certain characteristics, latent in most children at the beginning of their school life, such, for instance, as independence, self-assertion, and enterprise, the courage to grapple boldly with new and strange problems, the pleasure in not only working for self, for outstripping others, and for coming out top in the wild struggle of life, but in order to be able to place all one's powers at the service of those who are in need of help.

The question therefore rises: Is it not possible to remodel the school of to-day in such a way that it may not lose any good qualities which it now has, and may yet do more justice to the nature of the child, and may develop in him that mental activity which is at present left dormant and allowed to die of inanition? Were this to prove possible, it would only be through devoting ourselves more than has hitherto been the case to the creative powers of the child, which should as far as possible be developed in that sphere with which it is connected both before and during school life, by inclination, by aptitude, and by economic environment. Just as to the infant the nursery in the home is the workshop of its mind, where the thousand impressions and stimulations received from its surroundings are worked into a picture of the world; so, as the child grows older, the workshop of the school

[1] Hence I cannot agree with those who would have the school adapted exclusively to the natural inclinations of the child. We cannot learn too early that it is often our duty to work against our inclinations.

must be the central workshop of its activity, whence it readily passes into the class-rooms to return to its practical work armed with new knowledge which that work has itself demanded.

Our book-school must become a school of manual labour linked up with the play-school of earliest childhood.

It is not that our existing schools do not already demand work from the child. To read and write well and to do sums correctly is, of course, work which may have a great educating influence on the character and will. It may even acquire the value of productive work if we do away with the breaking-in machinery of our present schools, and if we can only appreciate the fact that the little child would rather work out from himself than let others work on him from outside. To understand the meaning of what is read, and to reproduce what has once been clearly understood with the full depth of one's feelings and to the full extent of one's powers, to give by one's own methods a clear idea of the results of one's own experience to others, to follow up in mathematical calculations what one has seen in space and time and observed in the school-workshop or in everyday industrial life—all this is certainly productive activity which can produce all the benefits of real work.

But, in the first place, this sort of work is chiefly *mental* work, and, if it is to have much influence on the child, presupposes no inconsiderable *intellectual* development. Secondly, during school life at any rate, it is not always connected closely enough with the rest of the child's experience; thirdly, it promotes only the child's own growth, promotes only its own pleasure, only assists it regardless of its fellow-creatures.

What the new work-school needs, in addition to this mental work, is a rich admixture of manual work. For here, for the great majority of human beings, the most fruitful field of development lies. It needs two kinds of work which shall, if possible, be in some way connected with the bread-winning or home work of the parents, so that the work of the school shall not be interrupted every day when the child takes its satchel from its shoulders. "If a child has to know and learn more than its father knows," says Pestalozzi in the "Swansong," "the teacher must interweave his supplementary work with that of the father, as a weaver weaves his flower into a whole piece of cloth."

Thirdly, what the work-school needs is work done by each child for the good of its fellows, work which from the first day shall continually preach the lesson: "The meaning of life lies *not in dominion but in service.*" Only when we thus ennoble school work can it be made the foundation of civic education, an education which all members of the community ought to demand as the first duty of the school, and to attain which we have hitherto relied, as in other matters, on empty words. Only from work done in common, comes the feeling of common tasks, the feeling of the need for subordination to a common purpose. With this work the warp of social life enters the school; and into it the shuttle of instruction throws the same myriad threads as the well-arranged home life of the child, with its helpfulness, its subordination, its devotion, its unselfish love.

When President Roosevelt, a few years ago, opened the Legislative Council in Washington, he said that the American State school-system has the great fault

of putting a premium on purely literary training and drawing the boys away from the *farm and from manual labour*. Certainly that is a fault. But those who should demand schools of manual training from that point of view alone, would take their stand so low that they would be unable to see the whole visible horizon.[1] Not for the sake of manual skill alone do we need workshops; not only in order that our people may not lose the habit of doing practical work, that children may be taught to plane, saw, file, drill, sew, weave and cook, or that the work of their hands may continue to be dear to them:—we need them above all in order to educate a race of men and women who shall learn to know and appreciate the object of the State and its advantages, and gratefully dedicate their services to it. We need such schools because *work and not books* is the means to culture, and work must be regardless of self in its service of mankind or of a great truth. We need them, also, because children are so very variously endowed, and only when their natural gifts are properly considered does our work in educating and instructing have good results. If we do not deal rightly with the gifts, we can only give a troublesome course of breaking-in. The Mannheim system of school organisation is, as a complete system, only adapted for the learning-school and the collective teaching which is connected, and can be connected, with such a school. But in the workshop, the laboratory, the school kitchen and garden, the drawing hall, the music room, each child

[1] Similarly M. Jules Ferry, formerly the French Minister of Education, was not emphasising the essential character of the new kind of school, when he declared that the country must be protected against the danger of being conquered on the industrial field by education through work.

may find the work of which it is capable. Here the weak child works side by side with the strong and gets, or at any rate can and ought to get, help from him. Here the small child may work at the small task and the elder child at its larger task together, and both feel the joy and blessing of successful labour. Here they do not need to march all abreast. For here, where pure memory work is impossible, the result is of far less importance than the method. Here the "individualising of instruction," elsewhere the most deceptive of catch-words in our wholesale cultivation of ear-work, is no longer the teacher's bugbear. It comes of its own accord.

All these considerations and reasons led me to busy myself during the past twelve years with efforts to discover means and ways of smoothing the road for the advent of the work-school. Advance could be made only step by step, and will continue to be a constantly new and troublesome operation so long as the training of teachers is not inspired by the completely new spirit of the work-school. First, in the year 1896, I succeeded in connecting obligatory school instruction in cookery for four hours weekly with all the eighth standards in girls' schools, and from these lessons I obtained all the material for the chemical, physical and physiological, as well as the arithmetical, instruction of the girls.[1] A few years later the school playground made it possible to provide gardens for all schools, and the kitchen gardens were put in the charge of girls of the eighth standards. About the same time aquaria, plant cases, aviaries and caterpillar boxes were sent to

[1] A year earlier my predecessor had made the first experiment in the seventh standard in one school.

the schools;[1] every year we distributed more than 10,000 bulbs among the third and fourth standards to be cultivated in the schools. In the year 1900 workshops for wood and metal were connected with all the eighth standards for boys, with six hours of obligatory instruction each week. This provided the material for drawing, as well as for the lessons in mechanics, geometry, and arithmetic. In 1903 began the reform of our drawing lessons, which from the very beginning were placed in the service of decorative art, and, therefore, of the productivity of the child. I was more encouraged to proceed in this direction after the investigation into the development of children's power of drawing which I conducted on a large scale. In 1907 I at last succeeded, after much difficulty, in obtaining for the eighth standards obligatory instruction in physics and chemistry for four hours a week, and this, notwithstanding strong opposition, is likely not only to retain its place on the curriculum, but eventually to make its way down even to the sixth standard.[2] That will depend chiefly on the spirit in which the instruction is given, and on how soon the teachers, to whom it is at present quite a novelty, can get accustomed to it. If the great experiment succeeds, and I firmly believe that it will, in the next few years the further problem will have to be faced, as

[1] Whether these contrivances will be able to maintain their position in the schools of our large towns is, of course, a question which I cannot answer definitely here. It depends on the training of the teachers in the art of making them a success, and on the conditions under which the schools themselves exist and which are not always favourable to such developments.

[2] A process which has indeed already begun; for in 1911 physics and chemistry became obligatory for the seventh standard.

to whether the workshop instruction cannot be placed in the service of laboratory instruction, just as to-day the sand-building boxes have shown that they can be used in the service of instruction in home knowledge and geography. Thus, by degrees, the old bookwork will be undermined, and I hope that the idealism of our teachers, and the power of the idea itself, which, though old, is ever new, will give a constantly increasing power for the transformation of the old school system.

When I see the sparkling eyes, the flushed cheeks and the untiring joy in their work of the boys and girls in our school workshops and laboratories, our school kitchens and school gardens, I find in them the best proof that we are on the right path. Here a new life comes to those who on the school benches were considered idle, stupid, and careless, and who would certainly have been put into supplementary classes had the Mannheim system been adopted. Not seldom, indeed, we find that such poor children far excel those of their school-fellows who have better memories, and that the delightful feeling of success and the unaccustomed praise of their teacher draw them out of their sleepy, dreamy life, so that they now make greater efforts to do their headwork well. What dreary boredom there used to be only six years ago in our drawing-classes, when the straight line, the segment of the circle, the geometrical figure, the abstract ornament, reigned supreme, and nothing could be made of them by any child with real talent and love of creative work. What a change there is now that the objects of the house, the workshop, the garden are there, and the children can exercise their love of drawing and their artistic

powers in the making and beautifying of everyday objects, —the weakling with his scanty means, the talented with the whole wealth of his imagination. What a breath of joy goes to-day through all our drawing-classes, what genius in decoration and construction has been suddenly liberated, and pours into the life of the home, like the flames of a great conflagration which seize on every inflammable substance in its neighbourhood. With what joy some children bring to school things which they have made at home and fill teachers and school-fellows with astonishment at a power of whose existence no one had previously dreamed.

It is indeed a revolution which the new drawing instruction has brought with it, a revolution which is almost greater than that which occurred eight years ago when we connected workshops for wood and metal with all the highest standards for boys, and school kitchens with all the highest standards for girls. Another great revolution is being slowly effected in the domain of nature study. The obligatory connection of school gardens with every school building was by itself a very important step. Unfortunately it is very difficult to develop practical gardening in large towns. At most, one can provide such occupation only for the highest classes. In order to bring the lower classes under some such educational influence we have had recourse to growing flowers in pots; we have not only done this in the schools, but, with the aid of the Gardening Association, we have entrusted many children with plants in pots to be kept in their homes.

The transformation of the book-school into the work-school is easier in the sphere of physics and chemistry, especially for boys, and can be more quickly effected

both in town and country by the introduction of laboratories, with which we have also made a beginning.[1] It is possible that they may prove to be the most fruitful field for the development of the work-school.

Physics, as taught to-day in all our elementary schools and in the great majority of higher schools, is a matter of memory, and, like all the natural sciences, it loses most of its educational value when taught from this point of view. The specific value of all instruction in the natural sciences in lower and middle schools lies in the methods of work and of observation. Only if a boy himself applies these methods does he learn to observe, to compare, to draw conclusions, to form objective judgments, to test carefully, to act independently; only then does he acquire endurance, patience, care, orderliness, cleanliness, and taste all the joys of inquiry, examination and discovery, which incite even the less gifted to new efforts.

But the use which more than all else gives the day-school laboratory value in my eyes, a use which no one has yet fully developed, is that it offers a most fruitful field for the *common work of groups*, where various talents can combine in mutual service for the harmonious pursuit of the same objects. Let me give an example. There is a class of 48 boys. According to the nature of the task to be done, or the amount of apparatus available, I divide them into 24 groups of two boys each, or 16 groups of three, or 12 groups of four. All

[1] We now have laboratories attached to all schools in Munich. Three classes at present share one between them, but we hope to give the eighth class its own laboratory, and there the seventh can also conduct its experiments in physics.

the groups have the same task. The first scholar of a group undertakes the work of observing; the second checks the work of the first; the third does the calculation and construction; the fourth checks the work of the third. When one series of observations is concluded the parts are changed. If something has to be made the pupil who is most dexterous has the first turn. When the *rôles* have been changed and the proper amount of variation secured, the results are compared; if the differences are too great, the possible sources of error are discussed, and finally the average is taken. In more important observations the average of the results obtained by several groups can be taken, and thus the final result has more and more the features of a common undertaking, and the element of personal responsibility for the result can be more strongly emphasised. The possibility of an individual working for himself for selfish motives is thereby excluded. He must merge himself in the group, must help, must be ready to serve, must teach those who know less than he does, and all the time he shares the feeling of common satisfaction or of common disappointment.

The school cookery instruction of the girls is similarly organised. Girls always look after a single cooking range in groups of six, with a fixed course of work which is duly altered from week to week.

Much more might be said about the practical working in nature study, in the earliest instruction by object lessons, in arithmetic,[1] in geography, in geometry,

[1] Cf. "Die Praxis der Arbeitsschule" (Carl. Aug. Siegfried & Co., Munich, 1909), edited by Oswald Warmuth. In the first number an example is given by A. Schmeckenbecher under the title: "Alle Neun!" It was very gratifying to me to see so independent an illustration of my idea.

which can be carried on so usefully in the open air with measuring chains, measuring rods, and sextants; about the right organisation of compulsory gymnastics and athletics and athletic games, of singing games for girls, and of the annual class festivals: but I must not enlarge on the theme further here.

The transformation of the book-school into the work-school in Munich has gone furthest in our continuation schools for boys. Here the boy with all his practical interests really stands at the centre of things; here all instruction starts on its course from the school workshops and goes back into them; here a professional school, which is always to be excluded from the elementary school, is possible. Owing to the strict classification, according to trades, which restricts attendance to boys in the same kind of employment, a spirit of close companionship and of intimate mutual relations is soon created. The result is the obvious devotion of masters and journeymen to the educational ideals of the schools and the growth of a spirit of trustfulness and of mutual respect. The new institutions at first were ridiculed and pooh-poohed; but the mockery and ridicule have already ceased, for the great usefulness of the work is ever becoming more apparent. And similarly, though my laboratories in the elementary school are still called useless toys, and their introduction meets with great opposition, the time will come, just as surely as day follows night, when it will seem incomprehensible that instruction can ever have been given in any other way.

When I ask myself whence comes such often excessive opposition, one cause suggests itself in particular, and that is the historical development of the

idea of "school." In earlier ages the work-school was unknown, and an institution which by means of *work* should lead to ever higher culture had not been thought of. The Brahmins' schools of the Indians, the Temple schools of the Egyptians, the Pythagoreans' schools for their disciples, the schools of philosophy of the Athenians, the schools of rhetoric of the Romans, the schools for reading and writing in the public squares and streets of all ancient peoples, the Church schools of the Middle Ages—all these were pronounced learning-schools, and, more than this, with the exception of the schools for reading and writing, learning-schools with religious or literary objects. The Latin schools, which grew out of the Church schools of the Middle Ages, formed the models for the non-classical modern schools (Realschulen) of the eighteenth century, and the methods of instruction in religion, languages, and history were, and had to be taught, as everything else was taught then, and is still taught to-day.

Mankind always finds it very difficult to break free from traditional modes of looking at things and traditional customs. This becomes all the harder if the whole system of organisation, inspection, and examination has been made to suit the learning-school. It is so easy to inspect and to examine when only the quantity of knowledge has to be measured. For the examination can then be conducted by wholesale methods, and the examiner has only to learn by heart two days beforehand the subject matter of the examination on the third day. The work-school makes such a system impossible; for there *the examiner must himself have practical familiarity with the subject, and not only knowledge about it.* Examination wholesale by

means of questions either oral or written is quite impossible. The work-school can no longer ask the elementary school child, "What do we mean by specific weight, and how is specific weight ascertained?" It hands him a piece of lead, stone, or wood and lets him actually determine the specific weight of it. The work-school cares very little whether or not the boy in the modern school can repeat the names of the twenty-four Linnean classes, for it knows that printers' type can easily act as a substitute for a weak memory. It is quite satisfied if the boy can settle the nature of the plant which is given him.

A third obstacle to the transformation is the increased cost. Schools have to be provided with workshops, laboratories, kitchens, and gardens. The teachers themselves have to be equipped with a quite different and much more permanent form of training than that which has been hitherto customary, while training schools, like all other schools, have been little more than cramming-places for book knowledge. Lastly, the work-school is not compatible with work in crowds, at least, not in work hours. In the workshops not more than from sixteen to twenty, in the kitchens only twenty to twenty-four, in the laboratories only twenty-four to thirty, in the new drawing-classes not more than thirty-six scholars can be provided with occupation and guidance at one and the same time.

But what is good always costs more than what is mediocre. And just as when we start for a long journey on foot we are willing to pay a little extra for a pair of shoes which will wear well, so we should be wise to make a somewhat greater sacrifice for that permanent experimental knowledge with which the

work-school equips our children for the journey of life, than for the memorised knowledge gained from books, that fades away all too soon. The extra cost, too, is not very great. For the extra time necessitated by the division of classes for practical work can in great measure be saved from theoretical instruction which now secures the whole interest of the child.

The more therefore we can cause people to appreciate the value of the work-school, by word and by example, the more we guard ourselves against that exaggeration which can see nothing useful in the old learning-school. The more we can convince men that the knowledge given by the learning-school can easily be incorporated organically into work process, and that we do not in the very least intend to neglect the three R's, which are so necessary for the future work and culture of the individual, the sooner will opposition disappear. We shall then be able to complete in all our school work a transformation which John Dewey thinks will not be very unlike that effected by Copernicus when he transferred the astronomical centre from the earth to the sun. "In this case the child becomes the sun about which the appliances of education revolve; he is the centre about which they are organised."[1]

When this transformation is completed, though not quite as Dewey imagines it, the union of home and school will also be completed for the first time. Both alike will be filled with the same interests, and the school will have the task of bringing order into the

[1] "The School and Society," p. 51. I should like most heartily to recommend to all teachers this book, which first came into my hands in 1907.

forces which these interests liberate, and into the spiritual and moral goods which those forces secure. Then the school will not merely teach the child to use the tools which the past has transmitted to the present in the treasures of civilisation, and will not simply encourage it to think justly and soundly and to act rightly; it will also bring to the parents a far truer realisation of the task of the school, and a much stronger sense of the educational responsibility of the home itself.

We therefore look forward with confidence to the time which the new school will bring us, and whereof the dawn can already be discerned in all civilised countries. When that time has arrived, Pestalozzi's ideas will for the first time be translated into realities. Then "observation" will really have become "the foundation of all knowledge," then the "principle of all instruction" will really be "taken from the unchangeable primitive form of the mental development of man," then "instruction will be the art which simply aids Nature's own efforts towards self-development," then "Nature and art will be as closely united in the education of the people as they are forcibly kept asunder at the present time."

CHAPTER VI

THE RECONSTITUTION OF THE TRADE SCHOOLS IN MUNICH

When I ventured to accept the invitation of your Lord Mayor to address you[1] on the subject of my proposals for the organisation of a system of industrial education I was conscious of two distinct emotions. On the one hand I experienced a feeling of pleasure, for I was delighted to be able personally to put forward my views among a new circle of experienced and earnest men on a question of such vital importance for us all; while on the other hand I experienced a certain feeling of diffidence, as indeed was natural in a centre which already possesses excellent institutions for the purpose of industrial education; for it has only recently given us an example hailed with approval by the whole nation—of a strong and original spirit of enterprise on the part of its noble ruler.[2] I am in fact

[1] This address was delivered on December 9th, 1902, before the municipal authorities and teachers of the town of Mainz and the educational officials of the Duchy of Hesse.

[2] In the year 1899 the Grand Duke Ernst Ludwig of Hesse invited seven modern artists to Darmstadt that they might there be free to put their ideas into practice: Hans Christiansen, Josef Olbrich, Peter Behrens, Ludwig Habich, Rudolf Bosselt, Patriz Huber, Paul Bürk.

well aware that many of the demands which I shall outline have been made before and are well known. But even the most important of them are only fulfilled in a very few of our towns. One of these few towns is Munich, and it is this fact which encourages me to raise the problem here: for it was my privilege to be the cause of the successful realisation both of the older demands and also of other new ones in Munich, and I was thus enabled to gain a vast amount of experience of which I now propose to speak. Experience is more convincing than even the best theory, and I hope that what follows will prove of service not only to the progress of sound educational theory, but also to those individuals who feel inclined to work in the same direction as we in Munich are now working.

I ask you therefore to follow me while I relate my experiences so that we may arrive naturally at those principles which have guided my work in Munich—principles which, in the interests of our country, I hope may one day meet with more universal acceptance.

In 1895 I was appointed Director of the educational system of Munich; and at that time there were in existence apart from the Royal School of Art and the School of Architecture the following institutions designed to further industrial education:

1. An industrial continuation school with three graduated yearly courses and 5-8 hours instruction weekly: obligatory for all boys between the ages of 13 and 16, and with some 180 classes distributed throughout the various school buildings in the town.

2. In connection with the school were three schools with some fifty optional classes for Handworkers,

confined to Master-workmen[1] and Journeymen of the Woodworkers, Metalworkers, Architects, Decorators, and Designers.

3. Four Guild-schools for Apprentices.

4. Three private courses for Journeymen.

The obligatory school was of the so-called "general" type, *i.e.* a school which took no account whatever of the particular trade in which a pupil might happen to be working either in the three hours devoted to drawing or in the remaining five hours of its weekly curriculum. Five hours instruction fell on Sundays and three on some afternoon or evening in the week. In short, the school corresponded exactly to those which still exist in the majority of German towns, constituted in the spirit of the 'sixties and 'seventies, and in the belief that it would continue and complete the so-called "general" education provided in the elementary schools.

The three schools for handworkers were confined to drawing, painting, modelling, and engraving, and like similar institutions which still exist all over Germany, they considered only the problem of instructing the master workmen and journeymen—divided according to their trades—in drawing. The hours were usually from 7 to 9 p. m. in the evening, and during the whole of Sunday. There were, however, a few day classes for drawing in which young men en-

[1] [The German "meister" is a man who has passed his exam. certifying that he is a master of his trade. The apprentice passes his exam., sometimes at his trade school, sometimes outside, at 17 or 18; he then becomes a journeyman, and may after about five years' practical work, pass his exam. as "meister," and only meisters are permitted to take apprentices. Where no confusion could arise I have occasionally used the word employer to avoid the cumbersome term "master-workman."—*Trans.*]

gaged in industrial occupations could continue their education in such spare time as they found at their disposal. Apprentices in a few trades (joiners, building and art smiths, tool-makers and engineers) received three hours instruction per week in a combined drawing class which exempted them from the drawing lessons in the compulsory continuation school.

Apprentice trade-schools were maintained by and belonged to Trade Guilds, viz., the tailors, shoemakers, glaziers and decorators, but with the exception of the last, which gave whole-time instruction during the four winter months, confined their courses to one single evening in the week from 7–9 p. m., and were very thinly attended.

The attendance at the courses for journeymen was hardly any better. One such course was given on Sundays by the Horticultural Society, a second from 8–10 p. m. by the Shoemakers' Guild, and a third was conducted by the Decorators' Guild on week days during the four winter months, parallel to the special school for apprentices already mentioned.

Such, in essentials, was the state of affairs in the matter of industrial education in a town of over 400,000 inhabitants in the summer of 1895. And as far as my experience goes other towns with very few exceptions were in a similar plight.

Further, the general continuation school was regarded by the pupils with indifference and by the master-workmen with annoyance, while for the teachers it was a vain sacrifice of time and trouble. Everyone, in short, was glad when with the end of his sixteenth year the boy was at length released, and only a tiny fraction of the apprentices availed themselves of the oppor-

tunity of continuing their education at the schools for handworkers. These again rode the old hobbies of drawing and modelling to death: and therewith they succeeded no doubt in turning out men who understood a practical design or could copy and occasionally compose, and who perchance had acquired a certain modicum of good taste and artistic insight. But they left their pupils entirely without the necessary practical experience to judge with accuracy from a moderately complex working drawing what would be the cost of production, to make an estimate, to submit an intelligent tender, to keep up a systematic bookkeeping, or to form a sound judgment as to the legality and permissibility of a given business transaction. Still less was any attempt made to cultivate an understanding of broader commercial economic problems: such trivialities were beneath the notice of the school for handworkers and still more of the school for industrial art, as is still the case with the majority of schools of this type. It was enough to have developed the capacity for drawing: moreover, as far as the public is concerned such products of education shine forth more conspicuously than any others.

Finally, there was a third consideration: for the extraordinary advance in the division of labour in every field of industry had rendered even good workshop teaching—an all too rare phenomenon—one-sided. Only very seldom was there any question of that many-sided—where possible all-round—technical training that is so necessary to the industrial apprentice: nay, it was precisely the most efficient masters, and those with the greatest range of acquirements, who gave up all attempts to educate their apprentices for

reasons that are only too well known. The old interest in the thorough training of the younger generation and the appreciation of the necessity of such a training had almost vanished—largely no doubt because, with the complete freedom of trade established in Bavaria in 1868 and the resultant competitive struggle, the feeling of mutual interdependence and industrial comradeship had been almost extinguished. It was no longer borne in mind that every industrial group has its own common interests, and that out of these interests arise duties that must be fulfilled in common, and rights that must be defended in common, if the trade of a town, of a country, or of an empire is to escape ruin. Hence it was that the master-workmen and apprentices were left to pursue their own individual interests: the apprentice deserted his master as soon as he thought he had learnt enough to serve under a new one, and the master to whom it was no longer profitable to train up apprentices saw in his apprentice rather a cheap instrument of production than a pupil to be prepared and educated to continue his business in coming years. The personal relations between them were thus broken up, and eventually regarded with complete indifference.

I am surely not mistaken in thinking that I shall have everyone with me in the above description, even those who are unacquainted with the conditions existing in Munich. For what I have described is no peculiarity of that town; it is a phenomenon that can be observed everywhere as a result of the incredible neglect of industrial education for which the past century is to blame. Even to-day our outlook is far too narrow. In the most favourable cases the *economic*

point of view is predominant in the organisation of trade schools. Not only in Germany but in almost every civilised country does this unsatisfactory principle still hold sway. In countries where there is no State monopoly of schools it is often the influence of *respectability* that is responsible for the admirable organisation of many of the private schools, such as we find, for example, in England and America. Where such a monopoly exists organisation is frequently due to the desire *to keep up appearances*. Some powerful tendency cannot be entirely neglected with the result that a reform is inaugurated, *ut aliquid factum esse videatur*, that things may not seem to have been left as they were. The result is usually an abortion. In matters of trade and industry, of agriculture and of commerce, our modern schools are considered almost exclusively from the point of view of *material utility*. Only occasionally a pretence is made that a higher end has been kept in view—the *personal efficiency* of the individual as a member of society.

That I should recall these old evils is not beside the mark, for the first step to improvement is to have before us a clear idea of the particular defects to be removed. Let me therefore briefly recapitulate. The growth of industry, the freedom of trade, the amazing development of commerce and the means of communication—all combined with the over-populated state of the country to produce the fiercest competition, and destroyed the feeling of mutual interdependence and allowed free play to egoism. At the same time no interest was taken in the all-round training of the next generation, which owing to the new social conditions consequently grew up with no appropriate

nourishment. As a result the difficulties of the old employer were doubled, the instruction he gave became less efficient, and so the process of deterioration ever repeated itself. State and municipalities founded schools to cope with the emergency; but they neglected to call to their aid practical handwork, and thus deprived themselves of what would have proved such an admirable educational instrument. Hence the continuation schools were for the most part unsatisfactory as regards times of instruction or internal organisation, or both together; and the handworker schools, the higher trade schools, and the industrial art schools all considered only one side of industrial efficiency, namely the purely technical, and quite ignored the fact that modern economic conditions are calling out for a commercial, and modern social conditions for a civic, education of the handworker. Moreover, these unsatisfactory schools attracted neither the apprentice nor the journeyman; for they either took no account of his trade like the "general" continuation schools, or like the art or the handworker schools claimed only his capacity for drawing; and they not infrequently even drove the most gifted pupils right out of their trades, turning a good decorative painter into a bad artist, a capable joiner into a mediocre furniture designer or an "architect," a stone mason into a sculptor, a watchmaker into an electro-technician.

If now you agree with my diagnosis of this disease then you will also follow me in its treatment, and will realise why I insisted first of all upon reviving among the employers of an industrial group an interest in the work of training. In almost all such groups I found

some evidence—however small—of a certain feeling of fellowship, shown by the gathering together of a larger or smaller number of employers to represent their common interests, in the form of guilds and unions of every kind. To these trade societies I endeavoured to give a new centre of interest by trying to engage their active support for the education of the younger generation in their trades. Nor was I content with merely showing them the way, but was at pains to help them to the means whereby this new interest might be yet further fostered. I was afterwards considerably assisted in my efforts by the new trade regulations.

The natural result of this plan was that the idea of a "general" continuation school was abandoned. In its place arose the special continuation school for particular trades; for I could only expect to get the interest of any trade-society or association in a continuation school connected with its own particular trade. It is of course true that this arrangement of the continuation school according to trades was no original proposition. Baden for example had already organised its industrial schools in this manner, at any rate as far as the larger groups of industries were concerned, and in Leipzig the system had also to a considerable extent been put into practice. What was *new* was the organisation of the school with the *single* trade as a basis: and it was also a new departure for *municipal* schools maintained at the public expense to have the corresponding trade combination linked up with each single trade school. The connection between trade associations and trade schools was established by allowing the former a share in organisation and inspection, by giving them the right to propose for

appointment properly paid and thoroughly capable master-workmen or journeymen as teachers, and by getting them to supply materials for the practical work and models for trade drawing; while the local education authority was responsible for buildings, salaries, machines, tools, and other necessary school apparatus.

I will not say that this combination of public and trade interests worked smoothly from the very beginning. It was some years before I hit on the particular guilds suitable for the purpose, because at first my demands as to the subjects of the curriculum, and especially the guarantee of the time required by the apprentices in school hours, appeared too far-reaching. But when once the first five schools—those for butchers, bakers, shoemakers, hairdressers, and chimney sweepers—had been successfully launched, the way was open for the rest. and one after another the remaining trades came into line.

The activities which were thus prescribed for the masters' associations proved themselves a powerful instrument for awakening in them a social spirit. Many, if not all, of those who at first opposed the scheme were won over; many who at first derided or even abused it were converted by their own apprentices, who returned from the school to the workshop with interest, with pleasure, and with useful practical knowledge of every description. The masters in one trade even inspired in those of another the desire for a similar school, and the necessary hours for which I had at first to fight so hard were now granted as a matter of course.

The success of the schools introduced also the factor

of personal sacrifice, which in some cases played a considerable part; and, as always happens in such circumstances, there was developed the feeling of personal connection with, and interest in, the object of the sacrifice. For men always value what has not fallen into their laps as a gift from the gods.

Never have I realised more clearly how a rational education can work wonders not only with the pupils but also with their employers, who are delighted by the successful work. The harsh selfishness of the individual disappears, the need of forming one great community is felt, and the hope of a good harvest strengthens the readiness of sacrifice. And with the pupil, too, the change was equally marked. It was no more the horrid continuation school that he must attend, but the school of his *own* special trade, the school of the trade in which his life's work would lie. No more sitting next to some Tom, Dick or Harry with whom he had nothing whatever to do, but there he was between two boys from his *own* trade who could often give him practical hints as they worked along together. In many lessons it was no longer some strange unknown teacher who confronted him, but a master or journeyman of his *own* trade, with whom he would afterwards have to struggle in more senses perhaps than one—whose difficulties he would have to share in bad times, and whose competitor he might later prove; but who was, all the same, now anxious to develop in him those capacities which would conduce to his general and industrial efficiency. It was no longer the cold and intangible abstraction called "The State" which forced him to go to the school, but he knew and felt a union of his

fellows behind him taking an interest in his personal development; and in their ranks he could learn the duties of the individual to the society of which he formed part. It will, I think, be agreed that at any rate with the best boys such conditions must from the very nature of the case be of inestimable importance in evoking that spirit of social fellowship which is so essential to all progress in industrial organisations.

The above may serve as a sufficient explanation of the way in which this union of public and industrial interests conduces to the extension of the sphere of education, and thus immediately furthers the ends we have in view. And the same principle underlies every problem of national or municipal government. One of the most famous European statesmen, Freiherr von Stein, had already seen this clearly a hundred years ago, as is shown by his statement that the surest way to complete the higher education of a people is to encourage each single section to take part in the affairs of the whole community. Only by direct participation in public life, he held, can a national spirit be engendered; and hence one must endeavour to apply all the available forces of a people to the solution of its national problems. But the foremost problem with which any people can be faced is the training of the rising generation, and the foremost concern of the industrial section of every people should therefore be the training of its youth.

When once the interest of masters and journeymen had thus been aroused, I grappled with the second group of evils described above, those, namely, arising from the *incomplete* and unsatisfactory nature of the training itself. And in order to keep alive the interest

already created I had to make the trade itself the centre of the whole curriculum. There are still plenty of people who object strongly to the demand, already made long before my time, that the school should concentrate on the trade. First look after the *general* education, they say: the vocational part is a secondary question. But the social and economic relations of modern society make it impossible to transfer to the education of the working classes the methods and principles adopted for that of officials and the learned professions; moreover, broadly speaking it is quite wrong to think that the method I have been recommending, and am now about to describe in more detail, will only produce one-sided and selfish money-makers.

One of the most unfortunate weaknesses in our modern educational theories is surely the fact that we have grown accustomed to assume, without further criticism, that the first aim of the school is to provide a so-called "general" education. All the ripest and most valuable knowledge that we possess comes to us through our calling, and where vocational training is conceived in a thoroughgoing spirit, it offers endless opportunities for the extension of our knowledge and of our powers. One of the acutest thinkers of our time, Professor Ernst Mach, in his lecture on the economic nature of research in Physics, mentions the fact that science in its real beginnings has always sprung up in the ground of handwork. Experience shows, too, that most of what a boy learns in the so-called general continuation school gets no hold whatever on his heart. His real interest lies in his trade, in his everyday work—this is true at any rate of the best apprentices in all the so-called skilled trades. A

man's strongest emotions are always those connected with the attainment of the practical ends of life, and if we foster such feelings in a pupil we can win his confidence and make him take pride in his work. And when once this is accomplished we can make of him not only an efficient handworker, but a good man and a useful citizen.

But the requirement "that the trade shall be the central point of teaching" says very little. And generally the demand is made in such a manner that people are content solely to advance the *technical* side of training, or even that part only of the technical side represented by drawing. But in recognising the deficiencies of industrial training as we know it to-day, we are forced to admit that a complete education of the manual labourer is only possible when its *economic* and *social* aspects are borne in mind as well. And it was a combination of all these three features that I now endeavoured to effect in all branches of the organisation.

In order to give due prominence to the *technical* side, I introduced into the curriculum lessons about the nature and history of wares and tools, as well as drawing and modelling; and, above all (in order to complete the work taught in the trade itself), purely practical workshop teaching. Also, by visits to the best appointed modern workshops or factories we tried to broaden the technical outlook.

Secondly, *Business economics* was represented by lessons in trade arithmetic, bookkeeping and business composition, and correspondence, and by an introduction to the general problems of industrial organisation (the law concerning the protection of workmen,

relations of employer and employee, insurance, trade management, and trade associations).

Thirdly, education for *Citizenship* required instruction which would guard against the danger—pointed out by Gréard in 1872 in a memorandum to the municipal authorities of Paris—that "the man may be lost in the apprentice, the citizen in the worker." This danger will only be squarely faced when we bear in mind this third principle of all education in our organisation of special trade schools. Our modern constitutions have already given the masses a considerable share in national government, and at the ballot-box the idlest and most ignorant day-labourer is on an equality with the most learned statesman or philosopher. We have no alternative but to see to it that at any rate the most efficient workers shall have free opportunity to gain a clear understanding of their social duties.

One part, and by no means the least in the education of the citizen, is played by the social character of the work which I prescribed for the school workshops, and by the share which the trade organisations are encouraged to take throughout. The other, the more theoretical part, is developed by special lessons in social subjects and Hygiene, designed to give an idea not only of how to conduct one's life in a sane and healthy manner, but of the historical development of trade, industry, commerce, and the national constitution. By this means a boy's eyes can be opened to the innumerable interests which bind man to man, and to the truth that it is not selfishness but self-discipline which fits each of us for the struggles of economic and social life; and he will see that a blind regard for self and personal interests is fraught with danger, not only

to the welfare of the community but also to the egoist himself. This form of education, into which I have gone in detail elsewhere,[1] has now been introduced—under the title of "Information about Citizenship and Hygiene"—for about five years and one special hour is devoted to it every week. We also endeavour by optional gymnastic lessons and school excursions, and by evening gatherings in the company of those who have already obtained a master workman's certificate, to develop a social spirit and to guide the legitimate desire for pleasure into more refined paths.

In particular we were fortunate with regard to the gymnastics. At first we proceeded carefully and introduced obligatory lessons on purely physical grounds in the case of the tailors. We then instituted optional lessons for the decorators; and the directors of both schools were agreed as to the good effect of the exercises on the general well-being of the boys and their eager participation in them. This led us to proceed further to the continuation classes for unskilled workers, for as everyone who has had any experience in the matter is aware, the interest of such boys is very hard to win by other means.

I imagine that no one will disagree as to the value of the plans I have described, but the question immediately arises—how about the money and time that the realisation of such a scheme implies? My answer is, "Where there's a will there's a way!" and the fact that Munich has shown the will, and found the way, leads

[1] In the prize essay (1901) for the Royal Academy of Erfurt, entitled "Die Staatsbürger liche Erziehung der deutschen Jugend" (Erfurt: 4th edition, 1909, Carl Villaret). English translation by A. J. Pressland, "Education for Citizenship" (London: 1912, Harrap).

me to believe that it should not be impossible in other towns also.

The first and most important point is the time, and not only *sufficient* time but the right time. As far as the number of hours was concerned, between seven and nine weekly were required according to the trade—with the following basis as an absolute minimum:

1 hour, business composition and reading;

1 hour, arithmetic and bookkeeping;

1 hour, social subjects and hygiene.

The remaining four to six hours are divided between information about tools and wares, drawing and modelling, physics (for mechanics and machine-makers), chemistry (for photographers, druggists, lithographers, bakers, etc.), foreign languages (for mercantile employees and waiters), and practical workshop instruction. These 7–9 hours are for *compulsory* subjects: but in addition it is desirable to arrange optional courses as far as means allow; and amongst these latter gymnastics should certainly be included.

And further as regards these hours: I refused to depart from the principle—no Sunday afternoon lessons and no compulsory lessons in the evening after the day's work. It is one of the grossest errors imaginable to believe that boys who are already mentally and physically tired can do anything worth considering in a continuation school after 7 p.m.: and I have always firmly refused to have anything to do with the organisation of special schools in connexion with any association that would not guarantee hours such as to assure us that all our trouble and sacrifice would not be in vain from the outset. Usually I endeavoured to secure one afternoon in the week from 2 p.m. to 5 p.m., and

another from 4 p.m. to 7 p.m. The remaining hours were placed as already mentioned, on Sunday mornings: but these Sunday lessons disappeared within a very few years.

The result was most gratifying, and, difficult as it was to obtain the preliminary concessions—I will not burden you with the history of my sorrows—we soon had over twenty special trade continuation schools in working order with some 2,000 boys attending them; and many associations made even further concessions than those which I have outlined.

Of course the economic and social conditions of each trade were specially considered, and every effort was made to allow for particular requirements in the matter of busy and slack months. In the case of the builders, decorators, potters, and upholsterers, for example, we have now arranged the school hours from 5 p.m. to 7 p.m. on week days during the five winter months, from October 15th to March 15th, *i.e.*, twelve hours weekly; on the other hand, in the remaining seven months they have only three hours weekly, on Sunday morning early, from 7 a.m. to 10 a.m., and in the regular holidays the lessons stop altogether. Other trades have nine hours weekly, but only for eight or nine months, instead of during the ten months of the school year. Thus photographers, goldsmiths, and confectioners have December free, while hairdressers do not attend the school during Carnival. Another group of trades have only seven hours in the first and second years, but nine in the third, and so on. In short, great latitude is allowed in this matter, and I especially avoided interference with the regulations proposed by the trade associations. The result can best be ap-

preciated by a glance at the syllabus and curriculum of the different schools. Every organisation is based upon complete accord with the trade. A general idea of the variety at the present time will be found in the Special Appendix on the Munich School System at the end of the volume.

The completed scheme to which all these efforts were leading meant the establishment of compulsory special trade continuation schools for pupils belonging to all trades employing more than twenty boys between the ages of fourteen and seventeen, each school with at least three graduated yearly courses. In the east and west of the city they were housed in two central buildings of their own, while in the north and south six or eight rooms in an elementary school building were allotted for their use. Trades employing more than 150 boys were given from two to four such special schools in different parts of the town, while those with less than 150 had only one school each for the whole town. Trade continuation schools not belonging to the building, wood or metal workers, and graphic trades were housed in suitably located elementary schools in the centre of the city.

Every trade school has its own special director, generally in the person of a capable elementary school teacher; only the larger trade groups, such as the building trades and the metal workers, are under the immediate control of an architect, engineer, or teacher of the graphic arts.

Besides these schools for particular trades there are general continuation schools for unskilled workers and those belonging to skilled trades employing less than twenty lads These make use of various elementary

school buildings in the town, and are under the direction of the elementary school headmaster.

Connected with all these schools for youths under eighteen are voluntary trade schools held in the evening, in the daytime, and on Sunday morning, at which journeymen and master-workmen in and out of work can pursue the further studies connected with their trade—theoretically, or practically, or in general subjects.

In all the schools mentioned the instruction is given by elementary school teachers, teachers of drawing, trade teachers, artists, technical experts, teachers from higher schools, master-workmen and journeymen as permanent, or part time teachers. But instruction in practical work is given only by master-workmen and by journeymen. The battle cry raised against teachers from the trades at the congress of handworkers in Leipzig is thus heard no more; schoolmaster and trade teacher work hand in hand. Continuation courses of all sorts are organised by the town authorities to ensure an adequate supply of teachers in all branches not already suitably catered for by the existing educational institutions.

Finally as regards the cost of the system. This, though by no means light, is far from being an insuperable difficulty. A few round figures must however suffice here. Thus the yearly expenditure for some 5,000 boys in compulsory schools organised in classes of about thirty on the average is approximately £11,000; and this figure is only appreciably increased when special permanent teachers are required with the further extension of the system that is rendered imperative in every large city. The higher voluntary schools cost

£7,500 for about 1,600 students in sixty classes; here, however, the cost will probably increase—for with the better education of the youth in his compulsory class comes the desire for more education in a higher voluntary class, after the attendance at the obligatory schools. These voluntary classes will then increase in number and improve in quality—particularly the schools connected with the art industries, which will extend their financial requirements because the pupil will soon be convinced by his own experience that a good master does not fall from heaven.

If the authorities of this town of Mainz, which in its obligatory continuation system and its school for artists and handworkers already possesses the foundations of a real industrial school organisation on the lines I have just indicated, decide to follow the example of Munich, then certainly their expenditure will be increased. But the increase will not be intolerable. Yesterday I had the honour of visiting your schools, and I found that a division according to trades has already been begun. The classes which I saw produced a very favourable impression, and I suggest that you include in their work lessons in social subjects and hygiene, that you secure the support and interest of trade organisations, and establish workshop training wherever practical, to teach still more advanced trade work. Your compulsory schools will then possess in their essentials that form and that efficiency which are so necessary to the development of our industry and commerce and the general welfare of our country.

The present attendance at your municipal continuation schools would suggest the organisation of some 20 special trade schools with, perhaps, 21 classes, and

you could add some six general classes for unskilled workers and for trades which have only a few boys. We may, on the figures I have already given you, reckon about £60 yearly per class, so that your running expenses would be somewhere about £1,650 a year. And if the remaining trade associations, industrial art school, and the handworker schools ceased to grind their own axe and decided on common action in the interests of the new organisation, then your expenditure would, it is true, be doubled, but the value of your work would be quadrupled. For it is only when our educational organisation attains the great end of developing a common spirit in all the members of a trade from their youth up, that we shall be able to point to an industrial population capable of grappling with its own problems, and endowed with powers of resistance in times of economic depression. We are still a step ahead of other nations in our educational institutions: but if we keep our eyes open it is easy to see that our neighbours are everywhere waking up and applying themselves with amazing energy and public spirit precisely to this problem of industrial education. Many of their institutions we must regard with envy, and hope that it will not need a period of industrial depression to bring home to us the fact that, in these matters, unity alone is strength.

It goes without saying that the organisation of trade continuation schools is no guarantee for the revival of a declining industry: the best of schools is powerless to effect that, at least through the school alone. But much may be done by supplementary institutions which have in view, not so much the education of those engaged in the industry in question, as of the pur-

chasing public. Regular exhibitions of raw products and manufactured articles in every little branch of our rapidly expanding industry are the best means for this purpose, and such exhibitions should be accompanied by explanatory lectures of every sort. The public is still attracted in its thousands by mere outward show; it cannot distinguish superficial from good work, the substitute from the genuine article, the artistic from the inartistic. No trade schools can be of any avail if the right people are not there to buy their products, and if the ignorance of the public forces the producer to sacrifice quality to cheapness, as in the case of contracts and tenders one finds it only too ready to do at the present time. In the matter of educating the consumer we have hitherto done surprisingly little. Only in a very few towns—to say nothing of States—has the problem been seriously approached. We have still to learn how to organise and arrange our museums and collections in a sensible manner, for at present, in most towns, they seem to be only designed to ensure an enjoyable old age for the persons put in charge of them.

Where machinery is now competing with human labour, handwork can only flourish if, by introducing the artistic element, it can succeed in ousting mechanical imitations. Moreover, general economic and social relations, both political and non-political, must often play a larger part in the development of a trade than the school. But if we can train a boy, not merely technically, but also in economic and social matters, and if we accustom him from his youth up to feel himself but a part of a great whole to which he is inextricably bound by all his interests, then we can

diminish the bad effects of these conditions, and provide ourselves with a possible means to remedy them. For economic and social conditions are not simply a product of immutable cast-iron laws, they are also a product of the stage of a people's education, not merely in technical, but equally in intellectual and ethical matters. In the peaceful rivalry, but not less in the fierce industrial struggle, alike of cities as of nations, it is to-day not merely technical and commercial capacity, but also general social qualities and sound social feeling that ultimately count.

And thus we are ever brought back to the final aim of all public education—the *education of the citizen*, the education of the individual, not only that he may take his place in the calling he has chosen, and that he may be able to stand *independent by virtue of his work*, but also that he shall contribute to the *well being of the body politic*. Only through the success of all can the free development of the individual be assured, and the future is with the community that has seen the true way to success. No doubt the task is stupendous; indeed, some social writers have pronounced the ideal impossible. But undaunted by doubts and difficulties let us set to work once more with the conviction that for him who *wills* there is no impossibility.

CHAPTER VII

THE THREE ESSENTIALS FOR THE ORGANISATION OF A CONTINUATION SCHOOL SYSTEM.[1]

THE more populous a State becomes, the more importance it attaches to the increase and multiplication of its economic resources. Of these economic resources perhaps the most valuable is that which is due to the technical ability and the civic social sense of its people. In England and France towards the middle of the eighteenth century the great manufactures, following on the perfection of technique, were regarded as an important source of revenue, and other States also bestirred themselves to utilise this source of supply. In about the year 1750 Austria sent skilled woollen and silk manufacturers into its Crown Lands to instruct the people and at the same time adopted the system of itinerant instruction. It issued a concession for spinning schools for the whole of the Austrian Crown Lands and established various schools of manufacture. Since that time provision for technical instruction has been ever more widely made in all the civilised countries of

[1] Lecture delivered on the 7th October, 1906, at the Congress o Continuation Schools in Munich.

the world, and has demanded ever increasing funds for the foundation and up-keep of schools and educational institutions devoted to this purpose. The methods adopted in these schools are two-fold :—The theoretical method with supplementary practical work carried on either simultaneously or afterwards, and the practical method, with or without theory. Not everyone arrives at the goal with the same ease by either of these two methods. In fact it is precisely those who are most talented for practical work who frequently suffer shipwreck when obliged by the State system to adopt the first method, which must, taken by itself, be regarded as the best. Modern handicrafts and the guild schools which serve or are connected with them generally adopt the method of pure practice. This practice of the handworker generally pays no attention to the theory of the trade. Everything is usually done in the way which tradition has taught, and even in the most favourable circumstances no one troubles if only the traditional practice leads to solid work. Here and there it finds in a purely empirical manner some improvement in method by the use of new raw materials or new tools, or new combinations of old tools. Thus by the exclusion of all theory the practice of handicraft remains for centuries at the same stage of development, showing a conspicuous lack of enterprise, and proving itself incapable, or at least uncertain, when faced by new problems. It takes its own way and settles down in comfort to a daily round, unless it is forced by external need to pull itself together. In spite of the hard fight of the age, we may observe this picture in our cities even more often than one might believe. It is the method of practice without theory,

or to express ourselves more clearly, of practice not thought out.

As a contrast to this we have the equally dismal picture of the speculative theorist without practical experience. It is certainly not to be found in handicraft, but exists in the technical occupations, and is not seldom a product of schools equipped in a one-sided way, and thinking to prepare for such occupations by mere teaching without any workshops or laboratories.

Where a trade or industry is to flourish or develop, theory and practice must stand in close relation. According to the degree of advancement of the technical work which the school serves, it must take the first or the second of the two ways indicated above. It may, in the first place, give a theoretical introduction to the scientific basis of practice, and sooner or later supplement this instruction with practical exercises. These serve above all to prepare for the later actual practice which has to assume its full proportions once the theory is ended. This is the way of the schools which are called in Bavaria technical educational institutions[1] but are in reality general and not technical institutions. Or, as an alternative, the school may introduce the young man directly to practice, introducing theory everywhere where the independent solution of problems set at an early stage requires its help. But a properly organised school of this type allows theory to develop out of the needs of practical work, and this in proportion to the talent of the scholar. It only gives an answer to those theoretical questions which occur to the scholar himself, or to those which are absolutely indispensable to the thorough completion of the

[1] Realschule, Realgymnasium.

technical work in question. One cannot make a general statement as to which of these two ways is the better as regards the technical education of the masses. For the scholar with a strongly speculative talent, and for technical occupations which require an extensive scientific foundation, the first way is the more certain and can lead the scholar further. It requires, however, more time, and generally drives the pupil beyond the practical occupation to which it should introduce him. The second way contents itself in general with a less remote object, and is the only possible one for those endowed with primarily practical gifts. It takes less time, and is naturally adapted to the teaching of handwork in a way which brings the boy straight into the middle of practical work. What we lack are schools which shall adopt the second method. For the great masses of the people this kind of school is absolutely indispensable. The ideal school would be a continuation school. Generally, however, the attempt has been made to work according to the first of these methods. Theoretical subjects have been introduced which might be of use to the artisan: chemistry, physics, mineralogy, zoology, botany, commercial geography, etc., and practical work has been left entirely to daily life. But according to their own admission[1] even the practice of their handicraft is

[1] "Apprenticeship training through repair work—that is the trade-mark of the shoemakers' handicraft," an employer states openly in the annual report for 1905 of the Handicraft Council for Upper Bavaria (p. 92). This applies not only to the shoemakers' craft. The chairman of the Apprenticeship Committee of the Munich House-Painters' Guild a few years ago chose quite arbitrarily forty apprentices in their fourth year, and told them to paint a door, in order to see how the masters instructed their apprentices in such a simple operation. They worked under

for three quarters of their pupils only one-sided, if not absolutely insufficient.

It is far from developing in the apprentice an intellectual understanding of his technical work. Therefore the experience of the last forty years can and must lead us to see that the way hitherto taken by the continuation schools so far was the wrong one. For the theoretical method, as adopted by the higher schools, is not possible for the continuation schools, owing to lack of time for instruction; nor is the practical method, because it had to renounce some of the practical instruction, while the regular practical apprenticeship is in general insufficient.

What else then remains, in order to make the continuation school fruitful, than organically to unite practice with the school itself, and to aim, not so much at replacing the workshop teaching of the apprentice, as at extending it where it is imperfect, by means of suitable workshops which hold out hope of putting in the place of an unthinking continuation of the traditional methods a system of work conducted on rational lines. This was one of the reasons which led me in the year 1900 to make the suggestion of organising the whole of the continuation schools where it was possible on the basis of practice, and to encourage demonstration workshops, not only as an essential

observation, and it was found that not a single one of the forty had any notion how a door should be prepared in order to ensure that the colour used might be permanent. Four years ago we took into our special apprenticeship school for turners an apprentice in his third year who had never once worked at a lathe; while on visiting the continuation school for tailors, I found an apprentice in his second year who did not even know the different kinds of stitches. These examples might be extended *ad infinitum*.

factor, but as the central point in the organisation. Other considerations, and, not least, the activities of the Continuation School Association and its distinguished president Pache, had already brought about a recognition of the fact that the occupation of the scholar must be placed in the central position in the school. Thus my particular demand agreed with the general one, for with the demonstration workshops the occupation of the pupil was really made the centre of the instruction. In them and through them the rest of the theoretical training of the pupil was carried out, but only to the extent to which practice demanded it.

Such an organisation, however, would be unsatisfactory—or only satisfactory to short-sighted people—if it did not allow of the introduction of the scholars to a *second* object of education. I mentioned at the outset that, not only technical, but also civic education, plays an important part in the advancement of the public welfare. In times of great economic crisis it is the general, moral, and social sense of the people, rather than mere technical talent and training, which avails, and civic education is capable of being admirably combined with a thorough vocational training, especially where the latter is based on practical work, as described above. So far, however, it has been neglected, and the trade school system has been organised exclusively from the standpoint of practical utility. There has been delay in the right provision in public educational institutions to secure that the rights and liberties of the people should not be liable to the misuse which arises from ignorance. The over-rapid development of the modern State has

far outstripped the development of its educational institutions.

One must, however, at once admit that to direct the masses of the people towards the given ideal by means of public educational institutions is one of the most difficult tasks of educational policy. It can only be done when a certain maturity on the part of the pupil is attained: a maturity which depends on experience of life. It is, therefore, not sufficient to attain civic intelligence, or even to cause a knowledge of civics to be learned by heart through practical instruction in matters appertaining to trade, law, or the constitution, or economics. The will must also be aroused to act in conjunction with the intelligence, and opportunity for action on the part of the individual must also be given. Intelligence, will, and opportunity to act according to one's will and intelligence—these three things must be encouraged by the continuation school which should educate for citizenship; but where the powers of the pupil are small we must often be content to *accustom* him to will and act in a social manner, and to relinquish the idea of his obtaining a deeper understanding of his duties.

No doubt I shall hear the retort: "There is nothing new in all this, and of course all education must take account of these three factors." It is certainly true that if one takes up any book on pedagogy one will find them on the first page. But from theory to practice is a far cry, and the way is missed much more often than one might believe. With regard to the education of the people to future citizenship I venture to make the statement that to a great extent we are at present experimenting with unsuitable means. Take, for

instance, the practice of analysis. I think it will at any rate be agreed that I am right in enunciating the following propositions: 1. You cannot catch trout with cherry stones; 2. If however you disguise the cherry stone as a grasshopper the trout will swallow the imitation greedily—provided (a) that it is the grasshopper season, and (b) that you and your rod are not seen by the trout.

The truth which may be deduced from this illustration was too long neglected in the construction of our continuation school system. The boy of from 14 to 18 years whose position is that of an apprentice in commerce, industry, or trade, does not generally rise of his own free will to the bait of things lying outside his range of interests. What does interest him and what he puts his whole heart into is whatever really satisfies his justifiable personal egotism, or makes him desire to be capable in his vocation and to make progress in life. Practical ability seems to him the most important thing; and after that drawing and knowledge of materials. He regards arithmetic and book-keeping as of less importance; civics as of none at all. To-day if one look through the reports of our voluntary schools for industrial art, trade, and handicrafts one finds that the good workshops are over-crowded; at the courses in drawing and knowledge of materials there is generally a full attendance; whilst on the other hand courses in arithmetic, general physics, chemistry, geography, history (apart from the history of art), are for the most part but poorly supported; and courses in law, the constitution, technique of trade, etc., as a rule cannot be held at all, or if held have the thinnest possible attendance. But all this is

intelligible from a knowledge of psychology alone, and one can only wonder that in the face of this evidence no more suitable methods have yet been found.

Everybody knows from his own experience that a subject begins to interest him the moment its connection is shown with matters which in some other way occupy a good deal of his attention. Our whole art of education will thus have to take the line of connecting in the least obvious manner what we wish to inculcate in the way of civic education with those things to which a boy would naturally turn of his own accord. In the language of psychology, we must associate our educational ideas with his impulses and inclinations. What attracts at any rate the capable pupil of the continuation school is generally the largest possible amount of solid practical ability, not book-learning and beautiful precepts. That is why we have introduced workshops into our schools in Munich. They meet more than anything else the egoistic forces; they are the grasshoppers with which we catch our trout. They are, however, not the end, but the means to the end in our education. We attain our end by connecting with the workshop what we really want to inculcate in the pupil, and we attain it the more readily as this connection is more manifold and more skilfully carried out. This is comparatively easy in the case of drawing, arithmetic, book-keeping, and the lessons on materials, tools, and machines. The pupils occupy themselves with materials, tools, and machines in the workshop itself. The cost of what has been done is calculated, and designs executed, in corresponding lessons. In the case of larger practical jobs, where the cost of buying and selling and current

expenses or questions of credit and terms of payment arise, book-keeping is closely connected with the workshop. Where physical, chemical, or technical illustrations become necessary, in order that the pupil may logically follow the processes of his work, this scientific instruction is given in a way suited to the requirements of the workshop, or even special preparatory lessons in physics and chemistry are arranged.

The necessary acquaintance with geography may be connected in the most intimate manner with the parts of the course dealing with the sources of origin or production of materials. According to the trade dealt with, wide or more restricted surveys of certain parts of the earth are rendered necessary. If, however, a trade has no need of either physics or chemistry I am persuaded that the young man need not afterwards be a less useful citizen because the continuation school has not further extended the knowledge which he obtained in the elementary school in these subjects. That is the error of most public educational institutions; they think to educate the scholar by giving him an acquaintance with as many things as possible. One is always hearing the cry, "But everybody must know this, that, or the other—it is part of general education." In answer to this, one can only state with the same frequency, "The first and most important duty of every school is to teach what is absolutely necessary, and that as thoroughly as possible. The rest will take care of itself. *After* the obligatory continuation school there is opportunity enough to increase the general knowledge of those who need it."

One subject, however, is connected with workshop training in all trade continuation schools without

exception, and in all classes; that which is concerned with the duties of the citizen. Part of this is connected with the hygiene of the workshop, and of work, and extended into a general course in the laws of health. Here manifold opportunities arise for physical and chemical illustrations with numerous experiments, even if of an elementary description. I should like to regard our civic training, however, as a kind of general history of culture, arising from the history of the particular trade to which the boy belongs. Every trade, every occupation, has its history, which leads from the simple conditions of the past through the rising or falling fortunes of the trade into the complicated conditions of the present. Through this historical method, which reveals step by step the ever-increasing interdependence and connection of men and of industrial groups, and brings before the mind the gradual weaving together of the interests of all occupations, peoples and states, the pupil best learns to realise the limits of his own justifiable egoism, and to understand the duty of the State in preserving the rights of every individual. A whole group of trades has here a very profitable field of work. One need only think of the history of the graphic trades, of the arts of the goldsmith, the painter, the builder, the smith and the locksmith, and of the textile and machine industries. Other trades have a less rich past, but even that may be combined with the elements of local history—although this has certainly in most cases to be dug out of the archives of the guilds—and they may thus serve to attract and awaken the interest of the pupil. Moreover it is only recently in the case of most trades that the history of their development has run on lines of its own. In

the Middle Ages the broad lines of development are everywhere the same. For this period School Inspector Lex has worked out for us a suitable text-book[1] which also deals with the economic situation at the present day. At the same time this instruction lays upon the teachers the necessity of much independent research, where a basis is not already at hand; we have, for instance, the book by Schwarz, the present head of the town council of Munich, on the baking industry in Munich, but it will take years before we get a satisfactory course in all the trade schools.

Moreover the teaching in this field can only be of an elementary kind. It must keep chiefly to concrete examples, and, even with these, only the more talented pupils will properly appreciate those outstanding events and occurrences which we must endeavour to abstract. It is therefore necessary, further, to give actual opportunity of working in the service and interests of others. That is the third and last fundamental demand of our organisation. It is yet more difficult to fulfil than the one which we have formulated above, and hence it comes that we find practically no instrument in any of our national schools for putting it into practice. Six years ago I indicated the way in which we must meet this demand. The general way to its fulfilment within the organisation itself is to make possible a kind of self-government on the part of the scholars. To do this certain definite duties must be entrusted to them which are otherwise generally left to grown-ups.

[1] "Lebens- und Bürgerkunde," 2 vols., bound; 60 pf. Published by Carl Gerber, Munich, with introduction by Dr. Georg Kerschensteiner.

One of the first of such duties is the responsibility for the orderly carrying out in general of the work in the workshops. In the case of a good apprenticeship a certain part of such responsibility falls upon the pupil. It seems to me quite possible in our numerous school workshops to allow this duty to devolve in turn upon the reliable pupils of the third and fourth years. A second method is for each in turn to take over the responsibility for the stock and the use of materials in the whole of the workshops, or for a given group. A third way is afforded by the preparation of work by the mutual efforts of several students, of whom one, elected by the rest, is responsible for the honest work put into the job and for helping his weaker assistants. A fourth way is provided by voluntary societies for gymnastics, excursions, or reading, within the bounds of the single continuation school. A fifth method is that of savings bank for mutual assistance, similar to the Mutualités scolaires of the elementary schools of Paris (see also p. 78). These are, however, not to be confused with the individualistic type of savings banks, which are naturally also to be encouraged at the continuation schools. One can see from these examples that, without any doubt, even within the limits of the continuation school arrangements may be made which will train pupils to act in the services and interests of others, and which may be expected to arouse a very important social quality now but little developed among the masses, namely the sense of *responsibility*. Illustrations and good precepts alone do not help us forward in this matter. We must accustom people to act in the interests of others from a sense of responsibility. Only then shall we school

officials have justified our own responsibility in matters of education.

To sum up: present industrial conditions, the economic development of the State, and the necessary provision by education for the justifiable egotism of the human being, direct the attention of the organiser of an industrial continuation school to *the workshop*, or rather—as regards professions other than agriculture—to *practical instruction* as the central point of the obligatory continuation school. The love of one's country should be united in the most intimate possible way with the inborn and vigorous egoistic sense of self-preservation (as it shows itself in every capable young man) by means of the idea of the *community of interests* of all citizens in the State; this may best be accomplished by the historical method, though there are also other methods. The two forces thus associated must be allowed to work themselves out in practice, and opportunities for this must be provided by a systematic arrangement of work in common and by a practical system of *self-government* on the part of the scholars.

In these three sentences the essential organisation of the trade continuation schools in Munich is expressed.

Since the year 1900 we have been occupied with the extension of this work. Many volunteers have worked with us, not least, Herr Schmid, one of our inspectors, to mention only one of a great number. To-day we have arrived in all essentials at the position I mapped out eight years ago. All important external arrangements have been concluded, and we are encouraged to further efforts. As regards the master-workmen and the majority of the manufacturers I must here state

that most of them willingly made personal and material sacrifices in order to render the whole organisation scheme possible. For all young people of eighteen who could not be introduced into special trade continuation schools, general continuation schools were established, with instruction and workshop practice in wood and metal work. Already in our eighth boys' class it is seen that the majority of the boys, even if they are not in trade, show the greatest interest in this subject. And since practical instruction, as has long been recognised, gives other excellent opportunities of education, we do not fear that education in its more general sense will suffer even in this group. Where it has been possible a trade society has been connected with the special trade continuation schools, so that the interest of the master-workmen and employers might be attracted to the school and the sphere of education extended as far as possible. According to the sacrifices made by the society it received corresponding rights. The rights of inspection, however, of electing the teachers, and of approving the curriculum, remain in the hands of the school authorities. The organisation is certainly not cheap, but with regard to its educational value it is far cheaper than the usual system.

We expended in the school year 1905–06—if we disregard the non-recurring initial cost of the establishment—about £32,500 for the continuation school system; while about 1,500 foremen and master-workmen and 7,500 apprentices attended the school. Per head of scholars, therefore, the average cost was 70s.

The future will show whether the way we are following will enable us to attain all the ends which I had in

view when drafting the original plan. We can already see the lively interest and the real participation of most of the apprentices and employers in their special school. Formerly it never happened that even one single apprentice after leaving the continuation school voluntarily announced his intention of continuing for a further year; to-day in many branches we cannot form enough classes to meet this voluntary demand. Here is the strongest proof that in one point at least we have hit on the right thing. I am quite aware that the methods we have adopted are not equally suitable for all towns or for all country districts. In Munich small and artistic trades predominate, and the organisation is made to suit their needs and character. In a purely industrial town material alterations would probably be necessary, although for example the machine industry of Munich has been completely included in the Munich schools. In smaller towns the strict division into trades is only partly practicable. Here it will be the work of the organiser in each group incapable of sub-division to put in the central position that which satisfies the demands of the individual. The complex nature of the circumstances is here too great to allow any a priori general standards to be set up. On the other hand, in purely rural communities the organisation is certainly capable of being carried out;[1] in small country towns with partly agricultural and partly industrial population, the circumstances of the district will make it necessary to decide whether the central position there is to be given to such subjects as fruit-growing, vegetable growing, beekeeping or poultry breeding, or to practical work in the elements of wood, metal or stone work,

[1] See Appendix II.

which are of equal value in most of the smaller country trades. I can also conceive of a means by which the obligatory continuation school would become entirely unnecessary; that is by a suitable arrangement of the elementary school up to the sixteenth year, in which in the upper classes elementary school education and instruction for apprentices would run simultaneously. I am referring to the institutions which I saw in some of the Swiss cantons and which may also be seen in the Écoles Nationales Professionnelles in France. I am also aware that no system of schools can exist for ever. One must be content to have helped at least the next generation a step forward. The one after that will have different needs and will find quite different economic and social conditions, and nothing is more likely than that it will make new and different demands on the technical school system, which is thus so peculiarly subject to the never ceasing changes of the times. One thing, however, we must demand from any organisation, however much it may keep the needs of the age in view—that it press at least in some degree beyond the present, and that it encourage a sane development of the immediate future. This development can, however, only be called sane when it brings the citizens of the State a step nearer together. And therefore a second demand must be made, not only of the organisation of the continuation school system, but of all the schools. They must work, as Schleiermacher said in 1826, that the idea of the State itself may inspire every free impulse and every free action.

CHAPTER VIII

AGRICULTURE AND EDUCATION IN CITIZENSHIP[1]

EVERY adult citizen, man or woman, master or servant, has three chief duties to fulfil. He is (or should be) a worker in a particular profession, which shows him his definite place in the whole State organism. Secondly he is a voting member of a well-organised group of people to whose welfare he must contribute, just as this group is responsible for his protection and welfare by virtue of its organisation of common work. Thirdly he is a human being who, besides the fulfilment of the first two duties, must never forget that a particularly rich field of activity is open to him in the formation of his own character.

Left entirely to himself, man, like the animals, will undertake none of these three duties on his own initiative. His whole activity will be devoted to satisfying the daily requirements of his life and his body. Every generation must be educated anew to take upon itself this threefold task. Consequently we

[1] A Lecture given on the 12th February, 1910, in the "Bavarian Agricultural Club." Published first in the "Zeitschrift für Kinderschutz und Kinderfursorge," Vienna, January, 1912.

speak of vocational education, civic education, and general human education.

The realisation of the necessity of vocational education dates from the most primitive ages. From it arise our elementary schools, trade schools and technical schools. The realisation of the necessity of education for man as a man may be traced back to the days of Socrates and Plato, at least so far as the favoured classes of Greece were concerned. The realisation of the necessity of general civic education arose only towards the end of the 19th century. The development of the constitutional State with its universal franchise and secret ballot has brought the importance of such education home to us with irresistible force.

It is not my intention to follow out the problem of civic education in any detail here: I have attempted that task in various works large and small. I will avoid all abstract considerations and come straight to the great concrete question: *how must we organise the civic education of those (still nearly half of our total population) who find their place in the economic organism through agriculture?* I am of course here thinking not of the small percentage of proprietors of large estates but of the enormous masses of small-holders and agricultural labourers.

There are two points in which the profession of agriculture differs from all others. In the first place it is not merely a profession but also a real basis of culture; and in the second, where conditions are anything approaching normal, it encourages independence and self-reliance more than any other work. It provides a definite and regular kind of life with

its own duties, which tend directly to further the interests of culture. The work which has to be performed in order to earn the necessities of life does not divide the unity of the family. Man, woman, and child, master and servant, work in winter and summer alike in an atmosphere of activity; are occupied by the same or nearly the same duties. The artisan or the business man carries on his occupation in the factory or the shop, and often the wife knows little of what her husband is doing. In special cases the co-operation of the wife is possible even here, though not that of the children. In most of the other occupations the work divides the family; it often (as with the factory worker, where man and wife go to quite different work) even puts an end to family life, or (as in the case of the busy doctor or official) precludes that full development which constitutes the foundation of all civic and moral education.

In agricultural occupations, conditions are quite different. There every member of the family group takes, or may take, his or her fruitful share in the common work—fruitful not only in itself, but also for the education of the members, every one of whom is obliged to contribute his or her share to the common welfare. Family and occupation have grown up in the closest connection, and since every communal undertaking, honestly conducted, develops educational forces of great importance to social well-being, one may safely say that no occupation offers a better field for civic education than that of agriculture. I say a better "field," for in order to develop these possibilities into realities, other advantages must be added, which result from the possession of freedom. If in many parts of

Germany the home of the peasant is frequently not the centre of a particularly high culture, the fault does not lie with his vocation. In the grain-producing States of North America, especially in Illinois and Indianapolis, and in the cattle-raising districts of Norway, Sweden and Denmark, many farms and cottages can boast of life of which anyone might be envious, a life such as is not to be found in large towns in the same proportion to the density of the population. In England and Scotland I have often come across farms, the spiritual and moral life of which was for me a pure joy. Their inmates were closely united and imbued with the spirit of family life; they took an active part in the economic and social activities of their country. They had bookshelves of their national poets; sometimes even libraries. Not only did they possess these works, but they really knew them and were influenced by them. If we compare this picture in conjunction with its political and religious background, with the truly desolate state of the Russian peasants, we may rightly conclude that the incomparable higher culture it implies is to be attributed largely to the advantages which come from the possession of liberty.

The other advantage of rural life is the relatively high degree of independence, which any extensive ownership of landed property confers. In every well-organised association (and not least in State and Church), there is a latent desire for power and for ever greater dominion, which is developed the more ruthlessly, the fewer the number of independent individuals concerned; but which must eventually end with the break-up of the association as soon as its ambitions have been crowned with success. Hence the creation

of the greatest possible number of independent individuals must be one of the chief ends of civic education. I am not concerned with this question to-day, but I should like to arouse a full consciousness of one thing, namely, that the development of the modern State, with its host of industrial workers, its capitalistic structure, and its armies of soldiers and officials, tends always to rob more men of their independence, and to bring more into positions where a penurious security is bought at the price of their personal freedom. It is this fact which in my opinion would make the socialist State impossible in the long run as regards culture, because, with the handing over of all the means of production to the State, all its citizens would sink to the level of mental or moral dependence on the State. To-day, owing to the great number of active natures outside the socialist ranks, the problem is not a pressing one, but it will continually increase in importance—how, in short, with an inelastic system of economic and social bondage, embracing the whole body politic, can we fail to choke all powerful individuality out of existence? Progress is only made by the continual struggle of free agents, and however bitter or deadly the fight may be for the individual, the community as a whole benefits. In the occupation of agriculture we have a natural ground for the development of the largest possible number of free and independent lives. This will continue to be so, if only the policy of the State clearly realises the results of the development of private estates on too large a scale. Mankind requires food, and, even if we had to do without all the benefits of modern civilisation, we could not forgo our daily bread. The provision of

this daily bread becomes, moreover, more important as the density of the earth's population increases; or at least until we arrive at that uncertain period when chemistry will provide for us the materials for our daily bread out of inorganic substances, and when our food will be cooked in retorts like gas or sulphuric acid. If the age ever really comes which will make agriculture superfluous, then mankind may again gather together to take counsel on educational problems. For the next few thousand years, I imagine, no danger will threaten the agriculturist on this score, and our communal intelligence may still allow us to seek for ways in which to secure the existence of a large number of men whose independence may rest on this occupation.

Independence and self-dependence, however, certainly create strong men—men of iron immutable characters—but they do not create civic virtues such as thoughtfulness for others, and sacrifice to the welfare of those unknown to us. A certain cultural element must be brought into the life of the agriculturist through what I should call civic education in its narrower sense. It is easily comprehensible on psychological grounds that independence creates a desire for power which may degenerate into brutal egoism just as much in the individual as in the group. The desire for undisputed mastership is innate in us, and the freer and more powerful the nature, the more unbridled does it show itself. This will be the case especially where patriarchal conditions continuing from olden days have given to the landowner an almost unlimited dominion. Thus we understand how the denseness, the stubbornness, the obstinacy, and the thickheadedness of

independent peasants has grown into a proverb. It is the great uniformity of conditions in rural districts which, while it does not decrease the relations subsisting between man and man, as compared with the life of the great towns, yet certainly diminishes their complexity. The greater complexity of city life must, granted the degree of independence remains the same, influence character for the good in consequence of the greater variety of personal experiences which accompanies it. Town life, far more than life in the country, forces all alike to become more considerate, and even such a question as that of traffic is not to be solved without the continuous exercise of self-control on the part of the individual. The fact of coming together in theatres, concerts, lectures, trams, or hotels, is a continual school of voluntary or enforced forbearance—even if boors are not entirely lacking. The words "urbane" and "rustic" show clearly that the grindstones of social life in the towns work more effectively for the formation of character than in the country. Even if this distinction is primarily external, psychology teaches us at least that these outward habits are the foundations of the real character.

If, then, the civic virtues are to flourish on the ground of the independence fostered by rural conditions, we must take care to increase the opportunity of social intercourse, so that the habits thus inculcated may become *real virtues, through a proper understanding of the social life of mankind and of the State.* The self-contained circle of the family group, and its productive work, must be extended by means of a school such as does not exist to-day: a school which will itself develop into a centre of common work by introducing

the work and duties of the home, and paying attention not only to studies and "lessons," but also to the duties of family life and of the village community itself. It should appeal not only to the younger generation, but to the older folk as well, through the participation of as many as possible in its work and interests, extended as they would then have to be by the rural continuation school. How is it possible thus to transform the rural school? is the question which we have now to investigate.

The school is in the first place for instruction; no future age will alter this. But absolutely nothing forces this instruction to be entirely divorced, as it is at present, from the whole domestic life of the child. In the cities, where children whose parents are employed in all kinds of different occupations come together in one and the same class, this isolation can only be broken down with great difficulty. The case is very different in purely rural districts where even the small craftsman is, to a great extent, occupied in husbandry as well, and where, therefore, all, or nearly all the children live in the same atmosphere outside the school; so what need here prevent us from arranging the curriculum in the closest relation to their work and life? So far our efforts have been meagre in the extreme. The curricula and methods of the rural schools are at present only miniature reflections of the much older town schools. The town dweller is, however, chiefly engaged in industry and commerce, in factory, workshop, store, warehouse, or shop; but in the country the work is almost exclusively agricultural, amidst the unbounded expanses of nature, which yet only find their way into the schools through the medium of books, pictures, and words.

If we are going to take our civic education seriously,

the first task of all is the vocational education indicated at the very beginning of our remarks. For the very first requirement for an independent citizen is, that we shall be able to show him his definite place in the social organism of the State; which means that he must have a field of work which he has mastered, wherefrom he derives his power to live and to do, his joy in work and his peace of mind. Only when a man is sure that he really has a function in life, can we expect him to help others and so show his gratitude to the whole community which offers him security, and is responsible for his general welfare. Consequently all civic education begins with vocational education, and the earlier this commences the better. The old superstition that vocational education makes not men but good-for-nothings and money-grabbers, is very foolish. It lies in our power to mould vocational education in such a way as to make it of value also for the formation of moral character, even more valuable than that premature general education which mankind still worships so unreasoningly. From day to day, moreover, agriculture becomes more difficult. The more the conditions of population and land in a country necessitate intensive cultivation, and consequently an ever-increasing use of scientific discoveries and technical inventions, so much the more necessary becomes an increase of knowledge and ability —an increase not only in direct connection with the occupation, but also of commercial, economic, and not least of civic intelligence. The farmers of Illinois, we are told by Davenport, the head of a large agricultural school, in his interesting book, "Efficiency in Education," produce in their grain cultivation from the 60,000

square miles of their land (about twice the area of Bavaria), one hundred million pounds worth in the year (about five times the amount produced in Bavaria). If, he urges, we improve agriculture by a suitable vocational training it will greatly increase the income of the nation. Money spent for this purpose is no unremunerative investment; it is invested in good securities in the best bank in the world, in the bank of the earth. Every extra bushel which is thus obtained from an acre of the cornfields of Illinois adds to the total income of the country three million dollars per annum. Every disease or pest which the peasant learns to recognise and to treat in the right way saves the State an enormous expense. Any thorough vocational education in the sphere of agriculture thus not only serves its own ends but is of direct public utility; and every step in the direction of permanent and efficient management is a step along the path we must follow if the future prosperity of a country is to be ensured. At the same time he points out how the neglect of vocational education, and the uneconomic methods to which it has led, have already rendered valueless large tracts of land in Old Virginia which had been considered inexhaustible; how the old cotton and tobacco land of the Southern portion of the United States has forfeited its best productive power through the ignorance of the first cultivators; and how even in Illinois, the Egypt of America, a not inconsiderable region has been so depleted in two generations, that although it had once made everyone rich, it almost immediately sank to an incredible depth of poverty; and in spite of numerous official experimental stations for the improvement of agriculture, small landowners could no

longer make a living without large sums of capital. Davenport thinks that the future of his country can only be safeguarded if the State makes full and careful provision for the training of the agriculturist. As a result of such provision he prophesies the growth of a civic intelligence which will lead to a legal prohibition of that export of phosphates to Germany, which takes every year a million tons of this indispensable manure from the U.S.A. For the United States—he thinks—will in the course of the twentieth century need this mineral treasure most urgently, since the enormous extent of prairie land has been shown to be poor in phosphates, and towards the end of this century the country will certainly have a density of population equal to that even of Southern China.

Thus we see that practical as well as civic objects make necessary an education as extensive as possible, and moreover an education which must begin early. A great deal—much more than it now undertakes—can be done by the elementary school being made a specialised school. *Agriculture is in its essence nothing more than applied natural science and technology.* Simple natural science, in its elements, is however an obligatory subject in all elementary schools; only the way in which the subject is treated and the time given to it are unsatisfactory. An important faculty of the agriculturist thus educated is that he should be able to make proper observations and to trace them to their right causes. The bringing out of this faculty cannot be begun too early, and there is no other way here than that of experiment. The pupil himself must learn by the help of experiments to ask questions of nature and to apply the answers correctly. This is possible in a

hundred simple experiments of a physical, chemical, and biological nature, in the school and in the home, in the garden, or in the open fields, with living plants and with collections of stones and soils. However modestly these experiments may be made, however few objects of the neighbourhood they may deal with, they are incomparably more valuable than the usual superficial instruction by words and books. The boy and girl should not study all *about* potatoes, about corn, about the apple-tree, about the bee—but the potato, the corn, the apple-tree, the bee. The scholar should not hear and read how plants grow, are nourished, and bring forth their fruit, but he should daily observe them, and by changing the conditions under which they live deduce the elementary laws of nature's work from his own experience. In order that the child may work out for himself the elementary laws of all phenomena, the natural history lessons of the elementary school are not obliged to deal with the orang-outang, the lion, the elephant, the seal, and coffee, tea, or cotton plants, as was the case quite recently in the curricula of certain districts of Bavaria and Prussia. It can and must restrict itself to the actual phenomena of the village and its surroundings. The boy and the girl must observe their trees, their birds, their insects and, what is just as important, must be able to give an account of their own observations. These accounts are at the same time the very best linguistic training—much better than reproducing the chief contents of a set piece of reading, or the imitation of readings of a descriptive or narrative nature, than the transposition of poetry into prose; all of which are accomplishments in the highest degree uninteresting to the young peasant, and thoughtlessly

adopted by the rural school from the practice of the higher schools. An immense number of exercises in practical arithmetic may be given in connection with these observations and experiments, which offer sufficient material for attaining the same ability in arithmetic as is now aimed at, generally with very fruitless expenditure of energy and time, by means of thousands of problems which no farmer will ever meet with in his life. Thus a rural school which puts nature-study in the centre of its work, and devotes sufficient time to it, will not only to a considerable extent provide vocational education in purely technical agricultural questions, but will also be in a better position to encourage good expression both in writing and in speech than the average modern country school which only too often passes by the real interests of the child—the interests which come to him from his whole surroundings in house and farm, in wood and field.

But we cannot grapple with the real problem of vocational education through the elementary school alone; to say nothing of attempting to bring it to any height of development. Here only a well-equipped rural continuation school, with sufficient time at its disposal, can help. These rural continuation schools must however *not* be an "extended or improved Sunday-school." *Wherever circumstances allow, they should be special schools,* in which agriculture is treated not in its peculiar technical form, but as natural science applied to the actual life of the village, and which work on the problems that interest the farmer not from books, but with the things themselves. The rural continuation school need by no means deal with the whole of the possible material as do our agricultural

winter schools; on the contrary they should rather deal only with local questions and thus put the school at the service of domestic or communal requirements. There are many hundreds of single questions whose thorough treatment will do more for vocational education than the superficial treatment of a whole system.

In milk-producing districts, for example, the questions of the composition of milk, the different qualities of milk, sterilisation and the problem of "pure" milk; the connection between the food, breeding, and treatment of cattle and the quality and quantity of the milk obtained; the valuation of milk for sale and for home consumption;—offer a range of activity for the school with hundreds of opportunities for observations and experiments, and are eminently suited to bring about an understanding of the local economic questions. It would also allow the relation of the milk-problem to other agricultural questions to be brought to the fore and give opportunities for numerous exercises in practical business arithmetic; and could therefore easily provide the subject matter for a whole continuation school year.

In fruit-growing districts a suitable field, not only for fruit-growing in itself, but also for many other questions of agricultural management, is provided by the problems of planting fruit-trees and bushes—their care, training, improvement, their diseases and pests, the preservation of fruit and the commercial side of fruit growing, together with numerous practical exercises in the school garden.

In grain-producing districts a wide scope for work, and also for the exercise of practical activity, is to be found in inquiries into the characteristics of different

kinds of maize, wheat, barley, and oats, into their seeding and reproductive capacities, into the advisability of their cultivation, into the quality of the soil in respect of temperature and composition, into the diseases of grain most rampant in the particular district, into import and export, and so forth.

Thus a list of possibilities could be made up to show how instruction in agriculture, given in the form of applied natural science, may be made attractive and fruitful without leading the school to demand encyclopædic and consequently superficial acquaintance with many things. It is by no means necessary that the continuation school should copy the not always satisfactory example of our agricultural winter school. The more it restricts itself to local conditions, the sooner will it awaken the sense of the pupils to agriculture and force them to think. This sense is to be valued far more highly than any book-knowledge which is not obtained by labour. One is more likely to find difficulties in making the right choice out of the many subjects open for the teaching of agriculture than to run the risk of driving anyone away by the limitations suggested. The chief thing is to do without general agricultural instruction, to keep always to the concrete conditions of the neighbourhood in which the school is situated, and above all through a purely practical arrangement of the teaching to bring up the scholar that he may think and act as an agriculturist should. For only in this way can we arouse that joy of vocation which is a postulate for any further development of the farmer.

The school authorities certainly are still unwilling to take up such a scheme, however warmly my propositions

may have been greeted by the majority of farmers present during the agricultural week in Berlin in 1909. But only in that way will they be able to attack with success the problem of vocational education and the much more difficult problem of civic education. Only by practical management in the sphere which we are here considering will it be possible to transform the schools—and this is the kernel of the problem of civic education—into *communities of work;* for this must be done inside the circle of activity within which the pupil moves—in his family and the other centres of his social interests.

In fact the really practical development of agricultural instruction simply forces us towards the transformation of schools into working groups, far more than does the organisation of trade and commercial classes. For in agricultural occupations it is obvious that many hands must join together in order to bring many kinds of work to a successful conclusion. When, however, many unite for a common purpose, they come with all their good and bad qualities into far closer contact. They have to learn to help and to be patient; they must treat others with consideration, and be themselves so treated; they must cultivate self-sacrifice and bear with the consequent difficulties. The important feeling of responsibility for one's own acts and omissions, which our modern schools no longer trouble to encourage in the least, will find no better soil than the voluntary association with others for a good purpose. For it is especially here that the individual is clearly reminded by his own comrades that the value of the work depends on the care, attention, and industry of the individual; so that one person can jeopardise the

result of the long and strenuous labour of his fellows. So long as our continuation school pupils one after another do the same tasks, write the same compositions and read the same exercises, not the least stimulus is given towards the awakening of the sense of responsibility. Words, maxims, and threats are poor means to develop this sense unless it has already been aroused in the pupil by his relations with his fellows. As soon, however, as the school puts a fruit-garden at the disposal of a group of children, or demands of them that they look after a bee-hive, measure a field, or lay out a vegetable bed together, the civic effect of the work begins directly—provided always that the teacher understands how to divide up the work aright, how to supervise its results and to use them to the greatest moral advantage. It may be still further increased if this practical work is placed at the service of the whole community, whether through the giving of small gardens to groups of pupils, by letting the proceeds of the school garden serve to lighten the expense of the continuation school itself, or by placing the practical work directly in the service of the municipality. Davenport relates that in Cleveland the older school children have taken over from the town the care of a number of the public gardens, and that this has helped not a little in the vocational, economic, and, above all, the civic education of the children.

As soon as the foundations of the qualities of mutual consideration and devotion are laid through such an organisation, instruction in civics will find soil on which it can bear fruit. It develops itself most advantageously from home knowledge and from the duties and work of the home. This civic education

in the continuation school is only to a slight extent a description of the organisation of the State—its legislation, its administration of justice, and its executive functions—and is still less an accentuation of the rights of the citizen; it is rather a clear explanation of the duties which the whole social fabric prescribes. I have found only a few useful books among the many which have appeared on civic instruction in Germany and Austria since my first publication on that subject. The French books on "instruction civique" are much too abstract and scientific. On the other hand, an American school-book which has grasped the system of civic instruction, such as I have repeatedly outlined, came recently into my hands. It shows in a series of thoroughly concrete pictures drawn from home conditions the work accomplished by rural and State authorities, and by the nation itself in the course of time; the tasks which lay before them, how and why the political and municipal organisations must make provision for sanitary and hygienic needs, traffic and transport, science and religion, education and art; how it must protect the beauty of natural scenery; how the citizens must rule themselves; how the control of the city, State, and nation is accomplished; the amount of the expenditure, and how it is met. Through all these considerations run moral reflections which call constant attention to the nature of the necessary duties of the citizen. These reflections are all the more efficacious since the development of problems out of historic necessities shows the pupil how naturally these tasks are determined. There are plenty of questions to be answered by the pupil, together with the citation of numerous sources of information; and, with the help of

these, his social sense can be quickened through the constant exercise of his own activity. I will only single out one group of such questions which show that the American is by no means a cold utilitarian as the average thoughtless German would like to brand him, and which illustrates at the same time the fine educational ideal and method of the book.

In the last chapter, which contains inquiries as to what must be done to preserve the beauty of a town's surroundings, questions are finally put to elicit independent answers from the pupil. He is asked if natural scenery is endangered by the growth of towns—if anything is being done to prevent an unnecessary destruction of natural beauty? What influence has the thoughtless killing of birds on this beauty? He is asked to give an account of the use of Niagara as a water-power for industrial purposes. What can the State do to preserve this wonder of nature? Does he think that the great utility of the Falls for the development of industry justifies the destruction of its beauty? Is his district remarkable for particularly beautiful homesteads? He is told to notice the houses in his neighbourhood in regard to the care of the turf, to vegetable growth, to rubbish and sweepings, to cleanliness and to flower gardens. Can he help to beautify the school surroundings? What has he to say about the streets of the district? What must be expended on their maintenance and improvement? How is the street paving done? What unnecessary noises have we? Can they be diminished or stopped? What must we do to keep the streets clean? What regulations exist for this purpose? What kind of trees have we in our streets and fields? Does anyone care for the

preservation of beautiful old trees? Is anything systematic being done here to increase the number of fruit trees? What public foot-paths have we here and which are the most beautiful? Are they enjoyed by inhabitants or by strangers? Who takes care of them? What can *you* contribute to their care and protection? Which are the most beautiful buildings here? What pleases you most in them? Is anything being done to encourage the taste for better buildings, and to provide sanitary and beautiful houses, especially in the poorer quarters? Write down your opinions as to the way in which a spirit of public enterprise will affect the existence of beautiful parks, open spaces, and public buildings.

For all these questions sources are given from which the pupil can supplement his personal observation. In this way all questions of national and local administration are brought within the range of the pupil's understanding, and so the lesson will remain impressed on him that he must later make them his own concern. Such a condition of the professional and civic education as I have developed above, and for which I have long ago drawn up schemes in various places, naturally cannot be carried out everywhere all at once. For even if the means can easily be found, and if many districts of Germany and Austria could already establish continuation schools of some value, the most important thing, the right teachers, will for a long time be lacking in many places. Not only will the training of teachers for such a course be much more difficult to carry out, but the salary of teachers in the country must be such as to prevent the best of them being driven away to the towns from their native place.

But the question is not whether such a proposal should be realised to-morrow to the widest extent; much would already be achieved if we could organise model continuation schools after the scheme I have outlined in various centres where conditions are favourable. We postulate a district friendly to the school, an able teacher full of enthusiasm for his task, who is properly paid and therefore willingly stays at his post, and an efficient and experienced farmer or gardener who can take upon himself the practical teaching, or at least supervise it most carefully. In centres where the boys' section of the Sunday school does not exceed 40 in number—and there are many such—a continuation school of this sort, with six hours' instruction weekly, may well be run on with annual expenditure of £25 to £30.

I am firmly convinced that an experiment in the right district would have had as quick and as complete a success as the organisation of the industrial continuation school in Munich, which was developed from the same fundamental ideas. As its trial in Munich has given a stimulus to many different places, not only in Bavaria, but outside it, *i.e.*, in the whole of Württemberg, in the Canton of Zürich, in Strasburg, Vienna, Scotland, Sweden, and the U.S.A., etc., so also will this rural model school find speedy imitators. But none will benefit more than the State and agriculture, and not least the Agricultural Winter School, which will then no longer need to scour the country to entice pupils by means of scholarships and prizes. For continuation schools such as we have described will be productive of an interest and a joy in the rational performance of work, and (as our experience in the Munich trade schools

demonstrates) will very soon stimulate the desire to extend and increase the knowledge they impart, to such a degree that the best pupils will of their own accord make use of every opportunity of further education. Moreover, they will prepare not only good farmers, but, what is still more valuable, good citizens as well.

CHAPTER IX

THE MODERNISATION OF CONTINUATION SCHOOLS FOR GIRLS[1]

"The empire of humanity, the highest ideal of ethics, has not only its first beginning and its permanent source in the family relationship, but when the latter has reached its highest form, is realised within it in a manner without parallel in any other form of society."—HÖFFDING, "Ethics."

WHEN the economic and social conditions of a people cause the development of new forms of life, opposing forces, although they may delay this development, can never entirely stop it.

Just as the crocus forces its way through the snow as soon as its time comes, so when the conditions of life of a people undergo a radical change thousands of new social forms thrust their way through the thick cake of custom and tradition; and, even were we to destroy them to-day, we should find their numbers doubled to-morrow.

At the beginning of the nineteenth century there was no woman's question in general and no question of education for woman in particular. Social conditions allowed a woman to exercise her natural vocation, and

[1] Lecture delivered at the eleventh general meeting of the Continuation Schools Association at Düsseldorf, October 5th, 1902.

the latter was considered so innocent and simple that it appeared to require no special training or education, or, at least, no other than that which a mother gave, and fortunately knew how to give out of her own experience. Even Goethe, in 1795, advises a troubled friend, who is anxious to protect young womanhood from the evil writings of the "match-making poets," that he should charge his daughters with the care of the wine cellar, the kitchen, and the garden, and let those who prefer to sit quiet devote their attention to needlework.

Neither statesmen, poets, educationists, nor, indeed, anybody else thought that it could be necessary to provide separate educational establishments for the female sex, even for those things which are an integral part of the life of a woman.

Since then we have had a revolution in almost every sphere of life such as probably no previous century in the history of mankind can show. In the place of the idyllic life of the small town we see the nervous haste and bustle of the city, which has also involved woman in its toils. A doubled and trebled population in the same area has made life immensely more difficult for all; whole districts have changed the plough for the steam-engine, and thousands of factories are enticing women and girls from domestic peace to the ceaseless production of goods.

But with the surplus of population, with this struggle for life on the part of all, with the hunt of the majority for a supposed happiness, has come the gradual weakening of an old and powerful factor in education; of a factor which is still indispensable in the service of an ever-growing culture and civilisation—the family. The

restlessness of work, the increased demand for pleasure easily obtained, and the wide separation of the family from the factory have inevitably brought about a weakening of its influences. It certainly appears that the decrease in the size and number of upper class families has been more than equalled by the increase among the poorer classes, but the ability to fulfil the duties which the establishment of a family imposes must weaken, where millions of young girls know the family only as a name, where millions of others must equip themselves at an early age for a struggle for existence outside their natural vocation, and where the large cities and industrial centres with the huge fortunes there amassed make pleasures appear doubly precious.

To-day, then, as regards the life of woman, we are faced by greatly altered economic and social conditions; though society, or rather the State and the municipalities, are endeavouring to solve the question of the education of woman with the old and, one is justified in saying, entirely inefficient methods. From this spring all those manifestations of unrest which we lump together under the title of the woman's question, and which are to a great extent countenanced by the more profound conception of the place of woman in social life. Many of these movements have appeared strange and incomprehensible to us, many too may be designated at once as of mushroom growth. But more and more those healthy and justifiable demands which have as common ground the claim: "Give us the opportunity and education necessary for us to develop the powers implanted in our nature," are coming to the front.

With this we reach a period where the interests

of the State in the retention of the family and of the spirit which it calls forth are at one with the interests of the individual woman. The State could well afford to wait so long as the female element—brought into difficulties through the increased severity of the struggle for existence—was raising the cry of freedom and equality with the male, without paying attention to fundamental differences of constitution; for this was less a cry of distress than one of false ambition which caused the women and girls of the masses to be completely overlooked in favour of the unmarried woman of the better classes. To-day, however, the State must no longer hesitate, for the best among the women's advocates are not putting co-education, higher (classical) schools for girls, or the right to vote [1] in the forefront of their demand, but rather the protection of the natural domain of woman, which is endangered. Here the need of the woman is the need of the State. We teachers and educational officials feel this need most of all when we see how even the best educational institutions in our cities bear but poor fruit, because the efforts of even the best disappear without leaving a trace amid the chaos which the absence of family ties produces, and how we lack the weapon of true charity in the fight against poverty and distress. It is not true that the elementary school alone can or does educate

[1] More recently a partial change has taken place. The authorities have since 1909 approved the institution of higher (classical) schools for girls in our large States, and I welcome the movement. Co-education has, however, retired into the background, and it is only demanded when there are no special higher schools for girls. The demand for the vote grows ever louder, and I can only hope that its fulfilment will not precede the preparatory education necessary for women.

the people; that is merely one of those over-estimates which cause us completely to neglect the fact that the first and most valuable means of education lies in the family, in each of the million families of the people, that the second is to be found in the collective life of the people itself, while the school as an educational institution falls into the third place. Imagine for a moment the school without the family. What would the fruit of our work be then? Without the help of the family the elementary school, as a rule, makes no child industrious, moral, or religious. All that can be accomplished for the child in the daily school work of from three to five hours may in the remaining hours of the day be ruthlessly undone.

Family life is not only essential for the school, it is in itself a school for a great number of important, perhaps the most important, civic virtues. It is the first and best forcing-house for those social virtues without which no prosperous civic life is possible.

The general love of humanity is only the extension of a feeling engendered within the family. It is the family, too, which shapes our inborn egoism into its most natural and permanent form, and brings the altruistic impulses to activity.

This invaluable educational force is certainly only to be found where the family has had a good chance of developing.

In the year 1900 the German Empire had 9·8 million families. The 9·8 million mothers were assisted in the work of the household by about 1·7 million other women and girls who shared, more or less, in its social duties; whilst the rest of the 28·5 million female persons were unmarried, widowed, or divorced. Exactly two-

fifths of the female population were thus living in the family, two-fifths were minors, and one-fifth were of age, but unmarried or widowed. Statistics do not state to what extent the latter took part in the narrower or wider duties of the family, nor do they state how many of the first two-fifths were really capable of fulfilling their duties by virtue of their education and their economic and social status. A thousand things do, however, show us that the great change in the conditions of life has enormously increased the difficulty of fulfilling such obligations for a large number of people, and that in a great measure family ties have rather been weakened than rendered stronger. Our insight into the nature and position of woman, which has become much more profound in the course of the last century, tells us, too, that we have so far done little—perhaps nothing—to give to those women who are willing and capable, stronger armour wherewith to fight the sterner battle for existence under their increased burden.

If this is the case; if on the one hand the family is the first and most important nursery of social virtues; if half of all the adult women in the Empire are called to protect and to minister to the duties of this first and original form of society, for which they are obviously destined by their natural characteristics; while on the other hand the enormously increased difficulty of the struggle for existence in our days renders the fulfilment of the duty much more onerous, or at any rate calls for an increased effort and a more profound insight into its nature—if all these things are true, what educational policy must we deduce from them? There is only one answer to this question: *provision for the*

education and training for their natural vocation is a most urgent duty of the State, and of all concerned in the education of girls. This demand is so important that no curriculum should remain unaffected by it, whether in the higher schools or in the special trade and industrial schools for girls. This need not mean the exclusion of that other claim—for a trade or literary education such as may enable a girl to earn her own living.

This demand, however, must force us to provide for the great masses of the people a school, be it only on very modest lines, which shall be entirely devoted to the interests of the family—a continuation school for girls. The call for such a school is heard more and more distinctly in the Teutonic countries, and even if it finds little response to-day, the change in social and economic conditions will make it necessary for educational policy to go hand in hand with social policy. We have already admitted the justice of the claim that working women must be protected in the interests of the family; and this protection must be supplemented by the power which a sensible educational policy will give.

It seems unnecessary to consider how far we are from the fulfilment of this demand. We will rather at once approach the two questions: how can we attain what we described as the chief aim of the continuation school for girls, and what means are available under existing conditions for the establishment of such a school? The answer to the first question will tell us what is necessary or at least practicable; to the second, what seems under present conditions possible and attainable.

When we talk of the methods which shall prevail in our national schools, we are accustomed to think almost

only of theoretical teaching in a certain number of school subjects, and the curriculum seems to us to be settled when we have decided on the number and type of these subjects, the amount of matter to be taught, and some method of connecting the subjects. We have recently also been required in choosing these subjects to exclude everything which is not of what is called a "general character," that is to avoid everything which might seem to be a preparation for a particular profession, especially any work of a definitely manual character with the exception of drawing and hand-work.

Like almost all elementary school curricula those of most of the continuation schools also bear the impress of the so-called "general education"; and it has needed the untiring work of numerous educationists through a long period to get a general acceptance, even for the boys continuation schools, of the principle that the vocational school is the better. I must refrain from explaining here why I have always been very uneasy in mind when, in order to save "general education" all attempts to provide practical training were drastically ruled out. Perhaps the enthusiasts for general education will take the trouble some day to study the results of this education in those German States which have also introduced a general compulsory continuation school system.

The results at the final examinations of these schools would surely cause them somewhat to relax their violent opposition to our efforts.

Fortunately in the girls' continuation schools the conditions are such that even their opponents can make fewer objections when we state that training for her natural vocation also covers the general education

of a girl. Where it can be carried far enough it includes such a measure of knowledge that it may be called "general," even in the fuller sense of the word.

Thus we see that the general continuation school for girls is a vocational school, and a school which prepares for the duties arising from the sympathy which a woman must feel for her husband's efforts to promote the general good of his country. The theoretical teaching in the continuation school for girls will therefore deal with (*a*) household duties, (*b*) the educational duties of the mother, and (*c*) the mission and the place of woman in the State.

In the first group the instruction will deal with practical questions of food, clothing, and housing, bookkeeping, household service, and the practical arrangement of the house.

In the second group we encounter what at first glance appears a difficulty, the introduction of the fifteen or seventeen year old girl to questions of the physical, mental, and moral education of the child. It is clear from the beginning that here purely theoretical instruction can attain nothing worthy of mention, particularly as regards mental and moral education. Abstract pedagogic, or even psychological observations do not arouse either the understanding or the interest required. For a long time, before I undertook the direction of the Munich schools, I felt strongly that this is a fundamental requirement of our whole public education of women, and one which is being neglected in an absolutely incredible manner. At the beginning of the 'nineties I had occasion to quote the words of Herbert Spencer in his book on education[1] which are

[1] "Education: Intellectual, Moral, and Physical."

so impressive that I cannot refrain from reproducing them here. "If by some strange chance," he says, "not a vestige of us descended to the remote future save a pile of our school books or some college examination papers we may imagine how puzzled an antiquary of the period would be on finding in them no sign that the learners were ever likely to be parents. 'This must have been the curriculum for their celibates,' we may imagine him concluding. 'I perceive here an elaborate preparation for many things . . . but I find no reference whatever to the bringing up of children. They could not have been so absurd as to omit all training for this gravest of responsibilities. Evidently, then, this was the school-course of one of their monastic orders.'"

I have no doubt that the difficulty of the subject is the main cause of the failure to introduce it generally into our girls' schools, a difficulty which we in particular find so great because as I have already mentioned. We Germans are always inclined to put teaching before the practice to which we are later forced. If, however, we consider that the first mental and moral education of the child is best guided by one who knows how to occupy it in the most practical manner, the difficulty reduces itself to teaching girls how best to occupy children; adding at the same time some considerations as to the influence which this or that action has or may have on the character of the young child. This method is quite a practical one, as is shown by our schools in Munich, and it is a great pleasure to me to be able to state that one of our teachers has worked it out so thoroughly that we have obtained most satisfactory results.

Finally, as regards the third group, the instruction deals historically with the conception of the State and its development from the family. In this manner the duties of the State can be deduced in their natural order, especially those which we combine under the head of social welfare. This leads to a consideration of the position and duties of woman herself in the life of the community.

We have urged that the general continuation school for girls must be a vocational school. But every vocation demands not only knowledge but also ability, and since the most exhaustive, most mature, and most permanent kinds of knowledge spring from practical work, the school must make use not only of the theoretical knowledge which we have just discussed but also of practical knowledge. For this purpose we have the same threefold division of the task that was put forward for the theoretical work. As a preparation for the duties of housekeeping, lessons in the school kitchen will be introduced in connection with instruction as to the different kinds of food; school savings banks will foster economy in household affairs; singing, reading, and the arranging of school festivals at suitable periods will encourage the desire for sensible enjoyment; games and drill will promote physical culture. In country districts the school curriculum will include practical lessons in the growing of vegetables, beekeeping, and the raising of poultry. In Munich the girls of nearly all the eight classes (and the eighth class is neither more nor less than a day continuation school) keep their own kitchen garden. As preparation for the duties of educating children, the girls will themselves study everything connected with children, will collect children's

songs and children's tales (especially fairy tales) and practise relating them. They will further obtain experience from time to time in nurseries and kindergartens and, above all, in their own family circle. From our experiments in Munich we find that this arouses the greatest enthusiasm. Finally, as regards the third group of practical duties relating to social welfare, we give the girls training in the preparation of invalid diet, and also allow certain of them to take part in the work of girls' homes. It is also advisable to arrange for visits to orphanages, homes for cripples and the mentally deficient, and asylums for the deaf and dumb and the blind. It would be most valuable if we could succeed in interesting a gradually increasing number of girls in the varied work of women's philanthropic associations; and this we hope to bring about through the establishment of a closer connection between these associations and the continuation schools for girls.

Besides all these internal reforms there are certain external improvements of great importance of which I will mention three as particularly necessary: the relegation of the whole of the instruction of the continuation classes to suitably qualified women teachers, the extension of the work of the school through women's philanthropic associations, and the arrangement of evenings for mothers to arouse interest in and understanding of the duties of the continuation school. We have in Munich put all three demands into practice: the last two thanks to the untiring work of our women teachers. My experience leads me, however, to attach the greatest importance to the first of these claims—so great an importance, indeed, that I must consider any continuation school system for girls as a failure from

the beginning if it does not by preference employ women to teach. Where it is a question of educating for the natural vocation of woman, a woman teacher will find, I may almost say instinctively, the right way in which to introduce it to those of her own sex. Nor must it be said that the strength of a woman teacher is not equal to the task; my experience is that the teachers at the girls' continuation schools in Munich have admirably carried out not only the duties imposed on them, but also a considerable number of voluntary duties, and generally with that devotion which is an innate virtue of their sex. The employment of women teachers is especially necessary where attendance at the school is voluntary. In this case every continuation school for girls is not only capable of standing its ground, but of rapid development, provided that the higher classes of the elementary schools are in the hands of the same teachers.

The question now remains of the organisation by which we are to develop these methods, and the possibilities are very varied; for naturally the differences of social and economic conditions in different towns are of great importance in this matter. There are many towns where trade continuation schools for girls will be more easily arranged than the general continuation school which we have been discussing. Here it is a question of setting to work quickly and then seeking to attain as far as possible what we have recognised as necessary. If in all our girls' schools we adopt the principle which we have recognised as right, namely, that all education has its consummation in citizenship training and that the civic education of a girl is coincident with her

education for motherhood, then all roads will lead to Rome. It was with this end in view that I included housekeeping, the education of children, and civics, in the obligatory subjects when revising the curricula of the girls' high school, and the needlework school in Munich, and also introduced a school kitchen in connection with each institution. Six years ago I arranged the curriculum of the highest or eighth class of the girls' elementary schools with the same object. Even our commercial school for girls and our commercial continuation schools do not leave the questions raised by the "Science of Motherhood" untouched. Only thus do we learn to avoid the mistakes which we find so often in our boys' schools, where the boys are taught everything conceivable except their future duties in the State and their relations with fellow citizens. For the purposes of the education of girls a mere copy of the schools for boys would be wrong; and the demand for co-education arises far more from the lack of suitable means for the requisite special schools for girls than from any inner need. For, where the mental and physical constitution and the final aim of education is so fundamentally different, common instruction in most cases will lead to full justice being done to the needs of neither sex. The country is little served by female savants whose study spoils their womanly nature, who are horrified at the thought of suckling a child, and who are no longer interested in the myriad details of domestic life. "Give us mothers," said Napoleon, and I would add, "Let them be as educated as possible; the more highly educated the better, for the duty of a mother is as beautiful as it is great and onerous."

This education should be served in the first place by those schools which we designate as general continuation schools for girls, and of which we cannot call too many into existence; ranging from the simple two or three hours weekly schools in Baden and Württemberg to the higher division of the Pestalozzi-Fröbel Institute in Berlin and of the Girls' High School of Agriculture in Reifenstein in Thuringia, which Fräulein von Kortzfleisch founded in 1897. If we disregard the specifically industrial and other specialised continuation schools, one may class the various types in the following groups:—

(*a*) Ordinary schools with a fixed curriculum for all scholars and preparing essentially for one only of the three specific feminine duties.

(*b*) Composite schools with a fixed curriculum for all scholars, but preparing for all three duties.

(*c*) Composite schools with an open curriculum not binding on all scholars, whose organisation may also allow for preparation in other than essentially feminine vocations.

To the first group belong the Schools for Needlework (as in Munich under the old organisation), schools for cooking and housekeeping (*e.g.*, the housekeeping school in Leipzig, after the plan of Frau Windscheid, which is of especial importance for the education of the masses), institutes for governesses and kindergarten teachers (*e.g.*, the Fröbel Educational Institute for Kindergarten Mistresses in the Elsässer Strasse, Berlin), and schools for nurses (for instance, that of the Baden "Frauenverein" in Carlsruhe).

Two types fall into the second group: an elementary, like our organisation in Munich, and a higher, such as

is furnished by the Pestalozzi-Fröbelhaus in Berlin, and perhaps also by the Lyceum in Leipzig, or the Louisen and Comenius Institute in Kassel.

The third group is relatively the most widely spread, and is to be found, though unfortunately often in conjunction with evening classes, in all large towns: Berlin, Breslau, Dresden, Leipzig, Hamburg, Bremen, Metz, etc. As examples, I would name the school under the direction of Hellermann in Alte Jacobstrasse Berlin, or the girls' continuation school of Dr. Jahn in Leipzig.

If we now ask, "For what shall we aim?" my answer would be "What we can attain." And if we ask further "What is most easily attained?" present conditions compel the reply: "The simple schools of a domestic or other vocational character, for these are the schools demanded by the activity of the young." We should therefore organise as best we can, and in a manner capable of fuller developments in the direction of the schools of the second group, which embrace the preparation for the three chief duties of a woman.

The continuation school for girls in Munich is a school of that kind, and it will perhaps be instructive in many ways if we close our observations by following its historical development up to its present, but by no means final, stage.

When in the year 1891 my predecessor in office, Dr. Rohmeder, brought out the first plan for a general continuation school for girls with voluntary attendance, there already existed in Munich two municipal schools which bore this character: the elementary school attended on Sundays and Holidays—or in some cases Wednesdays—with two and a half hours weekly instruction, including religion, language, arithmetic,

and general knowledge, and the "Central School for Girls" which also offered a voluntary course, two hours weekly, of instruction in the French language. Attendance at one of these two schools had been obligatory on all girls since the beginning of the nineteenth century. I emphasise this, because the high expenditure in connection with these two schools, which in the year 1895 amounted to nearly £1,000 (for teachers' salaries, school apparatus, etc.), certainly assisted the creation of the continuation schools which later took their place.

This is perhaps worthy of the notice of the organiser who believes that all development is best brought about gradually, and who, where he meets great difficulties, is content with a minimum and leaves further development to the future.[1] Dr. Rohmeder's plan allowed for three divisions: a general (which we now call the domestic), a commercial, and an industrial.

Besides the preparation for housekeeping proper, the curriculum for the general division also included mental and physical education. The plan was sanctioned in 1894; after nineteen years' existence the Central School was abolished and the continuation school with an extended curriculum took its place. When I took over the control of the Munich school system in 1895, I arranged in the school year 1896–1897, after a previous attempt, a fairly large number of continuation classes of three grades. They began with an attendance of 414 girls, almost the same number as the former Central School had contained; 139 had entered for the general and 275

[1] Thus, in 1891 Baden changed its continuation schools for girls (which were introduced in 1874 and resembled our Bavarian schools, with two hours obligatory per week) into schools for housekeeping.

for the commercial section. Seeing that the number of girls between the ages of 13 and 16 who were obliged to go to the Sunday schools was about 6,000, this was not many. The case is, however, put in a different light by the fact that I also introduced the voluntary eighth girls' class at the elementary school, for which I had prepared the plan in 1896. This class is essentially a year's continuation class in housekeeping with 29 hours' instruction weekly. As they began at once with 637 girls, it will be seen that 1,000 girls were receiving continued education. In the next year only about half the number came to the eighth class, but that of the continuation school remained about the same. I then reasoned as follows:—the external conditions are not particularly favourable for the voluntary continuation school, so let us consider the internal conditions. If we take a series of elementary schools and put the highest class in charge of capable and suitably trained women teachers, then these teachers, if they are able to win the sympathies of the majority of the children, will move on with them—as far as home conditions allow—to this voluntary eighth class. The same thing will happen if the teachers in the eighth class are allowed to move up into the top class of the continuation school.[1]

The results justified my opinions. After the above plan had been put into practice in 1899, I also extended in 1900 the Munich trade school for girls (teaching all kinds of needlework) by adding to it the housekeeping section of the continuation school

[1] The eighth class has just become an obligatory part of the elementary school system, and is no longer a substitute for the first year of the continuation school. In the autumn of 1914 the continuation schools for girls between 14 and 16 will also be obligatory.

for girls. The result was that at the beginning of the school year 1901–1902 the number of girls attending the continuation school alone had mounted to 1,017, although the commercial section did not show the same numbers as in 1896 in consequence of my having established in 1898 a three-year commercial school for girls, with lessons during the whole day, which proved very popular. To-day, I may add, we have to record a most satisfactory growth.[1]

From this little history you may see how, in spite of town conditions, a compulsory general continuation school for girls, not directly aiming at bread-winning or solely devoted to the preparation of women for their specific vocation, can be successfully brought into existence. But here I must not omit to mention the untiring, sympathetic, and self-sacrificing devotion of the teachers, which was of the greatest service in putting the curriculum into practice and which contributed much to our progress. I am all the more grateful when I see so many other similar institutions elsewhere dragging on an uncertain existence or disappearing entirely. The main features of our organisation since the reform of the curriculum and the regulations in December, 1900, are roughly as follows:—[2]

The housekeeping division comprises the three groups of duties already mentioned: preparation for the duty of the mother in bringing up her children, and for the duties and position of woman in the State. To

[1] In the autumn of 1909 the number of girls enrolled was 2,100. It has, therefore, more than doubled in eight years, whilst the population has increased only 11 per cent. If we add the 1,200 girls in the eighth class, it will be seen that about 3,300 girls receive a thorough education in housekeeping.

[2] *Cf.* also Appendix I.

this instruction six compulsory hours in the first class and seven in the third are devoted, while foreign languages, needlework and drawing are optional. It may seem strange that needlework of all things should not be a compulsory subject, but, on the one hand, much attention is paid to it in the elementary schools, and on the other the six or seven compulsory hours would not suffice to allow a thorough treatment of the other subjects as well. An increase in the compulsory hours, moreover, would probably lead to a diminution in attendance, apart from the fact that it would also raise the cost and in certain circumstances would make it more difficult to obtain sanction for the system. There are, as it is, 571 girls (out of 762) who attend the two to four hour classes in needlework, so that we may well hope to introduce compulsory attendance in time. In the commercial section nine compulsory hours weekly for three years are devoted to the elements of commercial knowledge, including a foreign language. Time will here bring about an extension in the direction of domestic economy; in the meanwhile we must content ourselves with the fact that a large number of girls have already passed through the eighth class before entering the second class of this section.

Like the rest of the continuation schools for girls in Munich, both these divisions attend only on one day weekly; and in all cases work terminates before five o'clock in the afternoon. In the year 1908–1909 we had in Munich 65 continuation classes for girls (40 for domestic economy, 25 commercial) which were distributed among the 23 school buildings of the town (against 31 classes in the year 1901). The total cost to the town was £3,700. Altogether the town gave £20,600 for the

education of 11,650 girls, after they left the elementary schools. (See Appendix I.) This expenditure increased with the year 1911–1912 to £21,000, whilst the number of girls for whom a valuable opportunity of education had been provided had reached 12,680, This should be compared with the table on page 214 showing the state of the continuation schools for girls in Munich in the year 1901.

Much is still to be desired, and many may still be dissatisfied to find that two-thirds of these girls of ages from 13 to 18 must be content with the very simple three hours' instruction at the Sunday or Wednesday school from the age of 13 to 16, and that the continuation school for domestic economy is used least by the children of those parents whose social and economic position put them most in need of it. Yet the present institutions indicate a satisfactory step in the direction of the demands which we have recognised as necessary in the course of this chapter. As certainly as the past years have brought us gradually nearer to our goal, so will the future certainly carry us further, without of course necessarily effecting the realisation of the ideal, which must always go beyond the actually possible. Day by day the numbers of those who are working for the same end are increasing, and day by day the goal for which we must first of all strive is becoming more clear among the kaleidoscopic intricacies of the problem of woman's education.

Provision for the education of girls (no less than for that of boys), the preservation of the family, the constitution and nature of woman, the desire for the welfare of the whole nation, all work in the same direction, and consequently when we examine the

—	Compulsory or voluntary.	Numbers in autumn. 1896.	1897.	1898.	1899.	1900.	1901.	Net expenditure. £	Remarks.
1. General continuation schools for girls (ages, 14, 15, 16; 6–10 hours' instruction)	Vol.	414	451	556	612	897	1,017	1,900	Founded in March, 1895 (three rising classes).
2. Wednesday school (ages, 14, 15, 16; 3 hours' instruction)	Comp.	6,223	6,470	6,076	3,325	3,380	3,470	1,250	In existence since 1803 (three rising classes).
3. Sunday school (ages, 14, 15, 16; 3 hours' instruction)	Comp.	—	—	—	2,680	2,662	2,613		
4. Eighth class (age 14; 29 hours' instruction).....	Vol.	637	366	475	585	672	686	3,600	Started in 1898. One one-year class.
5. Municipal commercial school (ages, 14, 15, 16, 17; 25 hours' instruction).....	Vol.	200	200	296	367	462	464	800	Taken over by Municipality of Munich in 1898 and entirely reorganised. In existence since 1862. Three rising classes.
6. Trade and needlework school (ages, 14–18; 24–36 hours' instruction	Vol.	540	507	512	461	461	524	2,950	Started by Municipality in connection with the school managed by the Society for the Promotion of Popular Education and founded in 1873. Five graduated half-yearly classes.
						Total	8,774	10,500	

better literature on the question of the education of women we find a very general agreement.[1] Not only are the forces increasing, but the differences in their direction and their objectives are diminishing. This makes us hope for a practical result, and all the more since the Prussian Minister of Education has given expression to the same opinions. "More important than the increase of scientific knowledge and of social accomplishments," remarked Dr. Studt at a sitting of the Prussian House of Representatives on the 17th of March 1902, "is the extension of the education of our girls to fit them for the general duties of life;" and whilst he points to the necessity that women should retain their distinctive position as far as possible, he explains that these considerations will be the basis of any further procedure on the part of the Prussian Government.

[1] The following sources are especially worthy of attention:—*Helene Lange* and *Gertrud Bäumer*, "Handbuch der Frauenbewegung" (Berlin: Moser, 1901), which gives in four volumes an excellent and complete survey of all the outstanding problems.—*Margaret Henschke's* admirable essay in "Frauenbildung," 1902 (Leipzig, Teubner).—*H. Höffding*, "Ethik" (Leipzig: Fuss, 1888).—*Paulsen*, "System der Ethik" (Berlin: Hertz, 1900; 5th edition, vol. ii, pp. 235–291). *Johannes Müller*, "Der Beruf und die Stellung der Frau" (Leipzig: Verlag der grünen Blätter, 1902).—The little brochure, "Ida von Kortzfleisch" (Hannover, Carl Meyer, 1895), is also noteworthy, but the diversity of its demands is, perhaps, somewhat hazardous.—The organisation of girls' and women's groups for social service in Berlin also works in the direction we have indicated: *cf.* the periodical, "Soziale Praxis," edited by Dr. Franke, 1898–99 (Berlin).—*Cf.* also *Lüngen's* essay in the periodical, "Die Jugendfürsorge," 1901 (Berlin: Nicolai).—*O. Pache*, on continuation schools for girls, in his "Handbuch des deutschen Fortbildungschulwesens," Part iv, pp. 1–35 (Herrosée, Wittenberg, 1899).—*Th. Lautz*, "Fortbildungs und Fachschulen für Mädchen" (Wiesbaden: F. Bergmann, 1902).—*Luise Hagen* and *Anna Beyer*, "Die Erziehung der weiblichen Jugend von 15 bis 20 Lebensjahr": two of the Prize essays crowned by the Royal Academy at Erfurt (Erfurt: Carl Villaret).

We are, of course, only in the first beginnings as far as the practical realisation of our demands is concerned; selfishness and short-sightedness, perhaps also economic and social need in hundreds of towns form strong barriers against our endeavours. But the barriers will fall: not as the walls of Jericho fell, suddenly and at the sound of trumpets, but piece by piece through long, painstaking personal effort. Speeches and meetings in general help but little. There indeed we find excellent thoughts without number, like many-coloured butterflies in the mountain valley on a hot summer day; but when the evening comes the butterflies have fluttered away and the meadows lie green and unchanged as on the day before. What will most certainly bring us forward is the tireless unostentatious personal efforts of hundreds of individuals with the same intent. We need conscious, self-sacrificing work, work which from morning until evening demands the patient ploughing of furrows in the same hard ground, work which does not relax nor rest satisfied with the results of the moment, but yet does not seek, impatient and impetuous, to wrest from to-day more than the day will yield. The lesson of history has never been that work like this, in the hands of a number of clear-seeing men and women, can be without avail. The best resolution, therefore, which we can make to-day can be expressed in one word: *laboremus.* [1]

[1] At the second general meeting of the German Continuation School Association held at Düsseldorf on October 4th and 5th, 1902, I set forth twelve principles which should guide us in the organisation of continuation schools for girls; and now, after five years of further experience, I have nothing to add to what I then said. (Cf the periodical "Frauenbildung" for 1902.)

CHAPTER X

A DUTY OF THE MUNICIPALITIES[1]

In an old book on the art of drawing the author prefaces his observations with the following words: "I assume, my dear reader, that you live in the sun, and not in some great grave of a city." Unfortunately I have long ago forgotten the author and the book, but this comparison has remained for well-nigh twenty years in my memory, and it always rises before my mind when any circumstance turns my attention from the brilliant light to the heavy shadows of our large towns. He was right; the cities of to-day are for thousands and tens of thousands the grave not only of receptivity and understanding of the mysterious life of nature, but also of bodily strength and the power of moral resistance. The old-fashioned family with its close ties cannot survive the flood of humanity in the modern city; its population endures but a few generations in brilliance, might, and power; fresh masses stream continuously in from the country to take the place of those who have gone under, flourish for a season, and then disappear in their turn without leaving a trace. The natural law of the city is this: that its

[1] Lecture delivered in Dresden, July 6th, 1903.

enormous product of labour in all spheres of human life entails a corresponding expenditure of mental and bodily strength. Without knowing or wishing it, thousands must sacrifice no inconsiderable part of a robust and healthy life in order finally to leave the fruits, which they have won through hard toil, to others, or in rare cases to their own relatives.

It would be useless to fight against this law. On the other hand it is not without avail—especially for towns of importance—to attempt to guide this expenditure of energy in a rational manner; that is, to regulate it in such a way that the energy necessary to the production of material and mental goods is not wasted. Just as it is of inestimable value to an industry to have at its disposal a body of workers trained through many decades, and just as industries often go to considerable expense to secure such a skilled community of workers, so it is of considerable importance for the city with its complex economic and intellectual life to be in possession of such institutions as will render it unnecessary to provide skilled workers for different kinds of labour by constantly training the raw masses who pour in from the country. I consider as possible, and also as full of hope for the future, an industrial and social policy which shall provide such institutions. Consequently I do not see—and certain events in the history of our old towns seem to me to prove the possibility—why the ability and capacity of those organisms which we call towns should not increase considerably, as they do in the whole of the rest of nature, when care is taken that certain valuable inherited characteristics of their inhabitants are strengthened from generation to generation.

The municipal administrations have as a matter of fact during the last fifty years, even if they have not always been quite clear as to the final object of their task, been actively engaged in removing or at least decreasing the danger of certain evils of town life created by the iron severity of natural law. Improvements in housing conditions, in the water supply, in ventilation, and in the lighting and cleaning of streets have received the greatest attention, and numerous regulations remind the citizen at every turn of the conditions under which he lives. Hundreds of thousands of pounds are devoted to general education; technical, commercial, and industrial art schools are erected; hospitals, infirmaries, and orphanages assume palatial dimensions with magnificent equipment. One task only still presents unusual difficulty—to ensure that men may learn to lead even under the increasingly unfavourable conditions *a life which is at once healthy and in accordance with the dictates of nature*, and that if a man has the will, certain institutions shall offer him the opportunity to translate his intentions into deeds.

I quite realise that the task of educating men to lead a healthy life in mind and body is an enormous one, and time alone will show whether it can be fulfilled. But what educational tasks which concern the masses are not great? And even if we cannot attain the ultimate ideal, must we therefore be content to relinquish what we can attain? Has over-refinement anywhere been carried to such lengths that the rising generation is lost to the desire for a natural mode of life?

The education of the townsman is certainly a formidable

task. Whichever way a man turns he is confronted by an excess of sensual pleasures in all shapes and forms, and the spirit of unscrupulous speculators will not tire in providing the means of satisfying at every time of day and in all seasons the most primitive and the most refined forms of enjoyment. Such investment is greatly encouraged by the unnatural conditions of life. Sky-scraping blocks—like rows of gravestones—shut out the air and the sun; thousands when they have borne the burden of the day have no choice but a bare inartistic cheerless room—or the nearest pub. We must add to this the fact that even the most simple house-keeping is for the most part very dear in relation to wages, with the result that after satisfying the most urgent needs of life little or nothing remains over to satisfy the demand for higher pleasures. And even when, by sacrifices and efforts of every kind, hundreds have struggled into a more human existence, they frequently pass away before it is possible for them to introduce their children to the same wise and simple life, and a new generation arises to begin the work of Sisyphus anew.

But these great obstacles to fruitful educative measures are to a certain extent counterbalanced by factors which work in favour of such measures.

Hard work and the struggle for life are in themselves a school of training which is by no means to be undervalued. The unfit go helplessly under, and only the capable prove as a rule the victors in the fight. The skilled worker of the town is an incomparably better subject for education than the unskilled day-labourer from the country. Besides this, many groups of hundreds and thousands whom a common interest brings

together, are to be found in a small area, closely united in a common struggle and in common work. Many of the associations which spring up like mushrooms in the towns are the result of a quite natural and very far-reaching division of labour with its consequence of common vocational interests and customs. Important educational forces are stored up in these associations and societies, which are at present used only to an incredibly small extent by our public educational institutions. Lastly, we must not forget that the towns, as centres of commerce and industry, have often at their disposal greater means than the country districts; and this is all the more significant when we consider how much greater and more numerous are the duties which the town has to fulfil in the cultural life of the community.

I will not go into the question as to whether the favourable or the unfavourable factors predominate in the towns. Perhaps in our "cultural hydrocephali," as Riehl called them, our enormous problem of education to a natural mode of life may, *to-day at any rate,* only be solved with money obtained under pressure—and then only in a very inadequate degree. But in the great majority of towns the ground is yet fertile, and it would be still better if the attempt had been made in time to bring our educational institutions into harmony with the extraordinary social changes, consequent on the industrial revolution, in many social conditions which are of importance in connection with our question. For a long time people were satisfied simply with developing the theoretical side of elementary and secondary schools, and then added—so as not to be behind in the commercial and industrial struggle—

technical and commercial schools. Only quite recently have we begun slowly to realise that knowledge and ability alone will not provide an existence worthy of humanity in the towns. Drainage-systems and the provision of water supplies, the simplifying and cheapening of traffic, the abolition of narrow streets and crossings, the conversion of the dirt heaps where children played into neatly fenced-off flower beds,[1] are not enough to put an end to the increasing misery of housing conditions and the bodily[2] and mental ruin of thousands of our fellow-citizens—unless we at the same time teach and accustom them to lead a healthy life, to turn the hours of leisure into hours of real recreation, and to seek to satisfy the natural desire for pleasure where the æsthetic exercise of the mental and bodily powers can develop its magic charms.

The Central Recreation Committee[3] has rendered no small service through the zealous activity which it has displayed in furthering the realisation of this ideal, and in finding the ways and means for one part of the great task which we are considering, *i.e.*, in showing the municipalities how best to provide for physical education. If I now sum up these ways and means and point forward to some further measures which have so far been little considered, my method will be neither that of enunciating principles nor of propounding theories. For apart from the fact that, as Goethe

[1] "Bürgersalat," as they say sarcastically in Rheinland.

[2] In the year 1895, out of 10,000 inhabitants in the country provinces of East Prussia only 67 men enlisted in the Army; in West Prussia and Posen 60, in Pommern 68, in Berlin-Brandenburg only 40, in populous industrial Saxony only 36 (according to Werhahn).

[3] [Zentralauschuss für Volks- und Jugendturnspiele—Trans.]

once said, theories are not infrequently due to the haste of the impatient intellect, even the best of theories obtained from the experience of a few towns will be of little use in hundreds of others, where the conditions are quite different. I will rather restrict myself to giving examples; and I shall thus have the advantage that examples are more attractive than the best and wisest of precepts. At the same time I shall endeavour to bear in mind that what may happen in a restricted field does not necessarily give a guarantee for the solution of the whole question. It is certain that without a satisfactory provision for the education of the body the general question of a sensible mode of life in the cities cannot be solved.

If we wish to educate people to live sensibly we must bear in mind that such education is dependent on two factors, *habit* and *intelligence*. In confining myself to an account of what the towns can do in order to provide the first of these essentials, I cannot avoid touching—at any rate in passing—on the manner in which they may also foster intelligence. Our youth of both sexes must be led, through the form of the curriculum as well as through the actual lessons, to the firm belief that nature acts through unchangeable laws and relentlessly punishes any trespass against her code; and neither sympathy nor Christian Science can avail against her vengeance. In order to imprint deep in the mind of the child the few essential maxims so that at the approach of danger they may arise in his conscience like a Mene-Tekel, we need, paradoxical as it may sound, only reduce the mass of material and the number of hours. We must reduce the material so that the little that remains—especially the teaching of natural science—may be

treated with the necessary thoroughness, without which it cannot have any lasting effect; and we must reduce the number of hours, because the children most active mentally can, when the curriculum is overloaded, only with difficulty be brought to understand that the requirement *mens sana in corpore sano* is a sacred duty of mankind. This reduction is cheap enough, the municipal authorities will say; and yet it is the least used by us in Germany where the good of a school is almost without exception measured by the cubic contents of the books to which the scholars have grown accustomed. I must unfortunately refrain from elaborating my views as to the feasibility and fruitfulness of this method. It also appears to me that we are by no means mature for these ideas; but perhaps the few courageous pioneers who founded the country boarding-schools in the Harz, in Thuringia, in Wannsee, and lately at the Ammersee in Bavaria will succeed in making a breach in the formidable wall which encircles us and even to-day prevents us from looking out into the true domain of public education.

I will now turn to the other essential of education for a rational mode of life, viz., habit.

Here I must also pass over the methods which aim at the *mental* equipment of the citizen in his struggle for life. It is my intention to show what we must do in order to steel his body so that intense demands on his physical strength may not exhaust it before its time. The most radical—and perhaps with our modern possibilities of communication the most practical—method would be to close, at any rate, all secondary and higher schools in the centres of our great towns, and to establish them in the environs or even further

away from the town, where are sunshine, woods, and streams. Still, I am not coveting the moon, and will therefore only touch on things which seem to me to be attainable to-day. The first reform which the towns could undertake would be the setting up of obligatory drill in connection with all schools, for which they could gradually build better equipped gymnasia and special drilling yards. It is undoubtedly generally recognised to-day that the two—or in especially favoured cases, three—hours per week devoted to physical exercise in the elementary and secondary schools are quite insufficient to strengthen the body of the city child to any real extent. Nevertheless, provided that the institutions which we are about to discuss make satisfactory progress, I would not myself advocate an extension of the number of drill hours beyond three. One thing is however necessary and capable of slow attainment: in all full-day schools half an hour's obligatory physical exercise. Provided that this instruction be given well and without taking the form of drill, that it be not only fresh and well-ordered, but also happy and free, that it take place where possible in the open, or that the gymnasium, where it may have to be held, resemble a playground rather than a packed sardine-tin—this would suffice to keep the heart and lungs in order and the body in good condition, and to accustom the boy or girl not to let any day go by without at least a modest amount of physical exercise.

In the same way I should like strongly to urge that not only in the secondary schools which follow the elementary schools, but in all the continuation and special schools in our national system, there should

still be physical exercise, partly obligatorily and partly voluntarily. For regular systematic physical exercise is not only a means of strengthening the body but also an excellent training for the will. If, as none will deny, the result of instruction is dependent on the interest which the student shows in it, then, at the continuation school age also, physical exercise conducted with the necessary energy is a very valuable factor in all educational endeavour and not only for that which we are discussing. Dr. Lorenz in a lecture on the Education and Power of Resistance, has pointed out that between the ages of fourteen and eighteen the heart and lungs undergo a development as at no other time; that the heart during this important time of sexual maturity increases to double its previous size, whilst the lungs show a yearly increase of from 100 to 140 cubic centimetres. These considerations led me to introduce obligatory physical exercise in the first place for all unskilled workers and for all without definite trades under the age of seventeen in the continuation schools, which in Munich are obligatory. I have introduced the same thing in those trade continuation schools where the occupation to be followed is of a sedentary nature—tailoring, for instance—whilst in the remaining trade continuation schools physical exercise is for the time being optional. The idea is still new, but all reports are unanimous that it exercises a great attraction even where it is only voluntary, and that it brings good results not only for the training of the body but also in the direction which is of the greatest importance in all educational questions—the training of the will. We choose for preference instructors from the large gymnastic clubs, where possible men of the

industrial classes, and attempt as far as we can to give the exercises on their premises, in order, when the boys grow older, through the connection thus established, to utilise these associations, of whose educational importance I shall have to speak later. Like the continuation schools, our large and small German trade schools, handiwork schools, and schools for industrial art, should not remain without facilities for physical training. France, I may mention, has no special schools *without* compulsory gymnastics. Germany has no such schools *with*. Yet in France, as in Germany, there are only twenty-four hours in a day, and their schools are, so far as I can ascertain, not less active than ours in attempting to provide commerce, trade, and industry with the best knowledge and ability. If the towns which already have trade and continuation schools were to take heart and decide to continue in these schools what they have found necessary at the elementary and secondary schools, they would have to make no further sacrifice than that of asking the town authorities to provide the small sum necessary for salaries, and to open the gymnasia already erected for the elementary and secondary schools for the use of those attending the other schools.

These demands, however, take a quite different form when we apply ourselves to the duty of really strengthening our city children, and accustoming them to learn to seek their recreation under the open sky, and to satisfy their desire for pleasure in ways which will not diminish but strengthen their physical and moral energy. Here the claim for games has the first place. I regard the question of games, with their two-fold

effects,[1] as one of the most important in the education of the masses in our cities. Unfortunately it is at the same time most difficult, for the problem of space is involved, and nothing is dearer in a large town than wide free playgrounds. And yet the solution of the task even in a town of the size of Munich with over half a million inhabitants is not entirely beyond our vision. When in the year 1890 the town administration began to deal with the matter it was necessary to begin by using the school-grounds already in existence for this purpose. In the north-west of the town there was the magnificent athletic ground of ten acres in extent which had been given seventy-five years before by King Ludwig I. to Massmann, and this was the only suitable space at our disposal. But from that time onward no school was built without a playground of over half an acre. With the help of far-sighted town officials three large playgrounds were erected in the south, south-east, and south-west of the town, with areas of six, three and a half, and five acres respectively, one of which can be flooded in winter and used for ice sports.[2]

[1] In his speech already cited, Dr. Lorenz admirably describes this double effect. On the one hand we have the formation of all-important bodily characteristics ; an upright bearing, free play of the limbs, flexibility in bending and turning, increase of muscular power in thrust and grip, in striking and throwing, and a rapid accommodation to every position in attack and defence. On the moral side the development of energy, unwearied initiative and intrepid self-reliance, when things promise well ; patience and tenacity, when one cannot gain ground against a formidable opponent. Calmness and attention for every emergency are also necessary, as well as voluntary subordination and conscious discipline in a spirit of true comradeship. The organiser, too, finds here the best opportunity of practising his valuable talent as officer and leader.

[2] At the same time, however, we lost between seven and ten acres owing to alterations in the public parks.

Recently, too, in the north-east and north of the town where our wonderful "English Garden" stretches for nearly five miles along the Isar, the efforts which we have been making for years to get one of the great meadows for games have met with success, and consequently the playgrounds of the town have again been increased by twelve and a quarter acres. Meanwhile the municipality was able to defray some of the expenses by leasing to one of the three great athletic associations of Munich a flat piece of land of one and a half acres along the Isar on condition that the elementary school children use it for their school exercises when required. Including the meadow in the "English Garden" the playgrounds have increased by about forty-seven acres in the middle of the town, or at least well within the city area. In all the playgrounds with about sixty-six acres there were in the summer of 1909, in about thirty playing days and 170 courses, some 350,000 elementary school children (10,000 pupils from the secondary and continuation schools, and 1,500 girls from continuation schools) who enjoyed their exercises in the open in charge of about 170 teachers and two inspectors.

Once the difficulty of space is overcome, the arrangement of athletic games demands but little expenditure. The municipality of Munich paid in 1911 about £1,000 for the direction and management, £100 for the inspection, and about £400 for the upkeep of their own playgrounds, the rent of those leased, and the provision of appliances, etc. Considering the happy hours thus spent by thousands of poor town children, this £1,500 seems a small sum in comparison with the total budget on the Munich elementary school system, which amounts

to more than £400,000. The games were begun in April, with a huge attendance, and continued with enthusiasm until the middle of October: about ten of the 170 groups even kept on through the holidays also. On the outskirts of the town private fields were placed at the disposal of the schools, some gratuitously, some for payment, and in some cases land belonging to the municipality was turned into temporary playgrounds.[1] The two great forest playgrounds belonging to the two chief Munich athletic associations, and situated outside the city precincts, the one in the east and the other in the west of the town, were most liberally placed at the disposal of children for their school excursions, so that at present there are fifteen acres of playground to every 100,000 inhabitants. Nevertheless, the problem of provision for the future still remains, for even the best playgrounds can only be retained permanently when they do not lie too far from the main centres of population.

For the school-children, consequently, spacious play-

[1] In the year 1908–9 the area of all the playgrounds (including the large Royal playground in Oberwiesenfeld and that of the athletic club Jahn which was made available) was 67 acres. In the course of seven years the area has therefore increased by nearly 25 acres. The number of days on which games took place was thirty, while the number of courses and participants increased to the figure in the text. Six years previously the £11,000 paid in 1908-9 for management, etc., had only been £6,000, while the total cost for upkeep, etc., rose from £180 to a total of £700 (£350 for ordinary and £350 for extraordinary expenses)—so that the grand total expenditure amounted in round figures to £1,700. In 1910–11 the number of groups was 177, the number of elementary children who took part 364,812; of continuation school children 15,117, and of continuation school girls 3,964. Two years, therefore, effected a very considerable increase in the number of those between 14 and 18 years who profited by these opportunities.

grounds of from $3\frac{1}{2}$ to $4\frac{3}{4}$ acres attached to the school buildings of their district are of the greatest value, not only because the children come into the playground as soon as school is over, but because they can be opened out of school hours, and in winter make excellent skating-grounds. However unfavourable town conditions may be, this is a case where the municipalities have an indisputable duty, and also a good chance of fulfilling it. Future generations will have real cause for complaint if we purpose a short-sighted policy in this respect.

For those attending continuation schools and for adults, the ordinary school playgrounds are neither attractive nor suitable. To attract these classes one must provide wide meadows with shady plantations and wooded parks, in which the inhabitants of the town can also take free exercise and are not restricted to endless paths and slopes with their conventional meanderings. Town authorities have in the last ten years done very satisfactory work, both with and without the help of private philanthropy and of the various societies for promoting social welfare. I will only mention the Kaiserberg-Park in Duisburg, the proposed new park in Wiesbaden, the Heide-Park and the König-Albert-Park in Dresden, the wonderful enterprise of some of the Rhenish towns (Cologne, Bonn, etc., which, in conjunction with the Town Improvement Society, bought the whole of the Siebengebirge), the Walter-Simon-Platz in Königsberg, the Kuchwald in Chemnitz and many others. Here, too, the German Emperor has again set an excellent example in giving up his hunting preserves in the Grunewald Park and opening this magnificent stretch of 11,000 acres, with

its varied natural beauties, as a public park with every kind of playground for the towns of Berlin and Charlottenburg. It is a true people's park; one in which there is not an inspector to guard each flower or a "Keep to the path" at every turning; it is a true place of relaxation and recreation for the hundreds of thousands who escape thither from the two great towns.[1] Dr. Schmid, speaking at the Sixth Congress for the Advancement of Recreation[2] very justly concluded his remarks concerning this park with the following wish: "May this Imperial example often be imitated amongst our Kings, Dukes, and Municipalities: and also, on a smaller scale, among the people themselves."

We may certainly notice to-day amongst all municipal authorities a distinct tendency to provide open spaces; but the method in which this provision is made is certainly capable of improvement. It is not sufficient to provide green meadows for tired eyes, to bedeck sandy wastes with carpets of flowers, to provide promenades for pensioned officers and officials, and secluded spots where loving pairs may whisper to the strains of the nightingale, or to come to the aid of nature with stray blocks of granite and roaring waterfalls. Youth must also have its

[1] Curiously enough this unparalleled gift was not welcomed in all quarters with equal satisfaction. Some people were afraid that the idyllic character of the great park would vanish and give place to pleasure-hunting. This, however, is a matter for the park authorities—and in any case the advantage of being sure that no building of any sort can ever be erected in this area is inestimable. The "English Garden" in Munich would long ago have been a prey to the activities of building speculators had not the prohibition been strictly enforced.

[2] [See note to p. 222, Trans.]

rights.[1] For this reason the maxim of all such undertakings should be—*No parks without playgrounds, and at least some quiet corners without flower beds.* Where, in fact, are our girls and boys to play about? The police and the traffic make it impossible in the streets, the landlord will not allow it in the courts, the neighbours object to it in the home, and the inspectors in the parks. We have in Munich a part of the town created by King Ludwig I., and laid out by him with great foresight and in full sympathy with the needs of the townspeople; to about 500 acres of building space it contains thirty-seven acres of open spaces laid out in three or four groups. At one time the children enjoyed themselves here in perfect freedom; to-day they are no longer to be heard. Serious wiseacres and busy workpeople pace the well-tended paths, students practise surveying with theodolites, children's nurses sit abashed on the benches. Only the *élite* have managed to obtain a few tennis places. In the centre of the town about ten acres of playgrounds have within the last twenty years been turned into parks no longer to be trodden by children's feet. The delightful "English Garden" in the heart of the city contains many hundreds of acres, which, apart from their æsthetic aspect, have—with the one exception which we have mentioned and which was only quite recently conceded—no better service to render than the provision of hay. Thousands of children look on to it from the neighbouring streets and houses with longing eyes, as Moses from Mount Nebo looked down

[1] I was greatly depressed the other day to see a model of the circular park at Würzburg: 100 acres of modern decorative gardening and not a single playground!

into the Promised Land. But woe to the trespasser who dares to set his foot on that green carpet! *Time will bring about an enormous change in the intelligence of mankind*, and we must join with the Health Societies in pointing out at all times, and in all places, this sore spot, to stimulate the social conscience, and to prepare the way for an insight which will realise that here, too, prevention is the chief duty of town hygiene. Horse-breeding and training still obtain the largest paddocks and race-courses[1] from the municipalities, and high prizes are given to encourage such diversions; even for the dead there are forest cemeteries. But in breeding men we leave the selection to the cruel fight for existence, and we pen the living within the cheerless walls of the city.

With the growth of public intelligence it will be easy for us to send the young to the playing-grounds thus secured, not only during the time of school and school holidays, but, what is much more important, also during the period of apprenticeship. The amount of voluntary participation during the school holidays and the apprenticeship period will then give us the first proof of the value of the games at the elementary schools. The second proof will be furnished by the use of the public playing grounds by adults, and the way in which the latter occupy their leisure time. I have always been overcome by mixed feelings when in the little mountain towns of North Italy I have seen hundreds of the inhabitants assembled on Sunday afternoon in the simple squares surrounding the church to

[1] These might nevertheless well be used for games such as we have been advocating without in any way interfering with their main use.

watch the ball games of the young men for hours at a time, taking the most lively interest in the vicissitudes of the game; though no tankards circulate among the onlookers. The third and last proof will be the development of national games and festivals, which will not need stimulus from without if our education is of the right kind. Even if we are in Germany to-day far from the ideal the reports of Baron von Leiningen show that the games' movement is gaining ground, at any rate in the schools. The advance made is as yet small, but when the present generation of boys and girls have taken our places, the idea will take firm root, that the pleasure to be found in games and sports is not only a hygienic training for the body but likewise for the mind, and it will be fostered whole-heartedly. It rests with us who in the State and the towns are entrusted with the management of the school system, to do what lies in our power.

The special attention of the municipal authorities should also be directed to excursions for both the elementary and secondary schools, as also to the more ambitious outings of the continuation schools. Quite apart from the fact that these excursions, if well directed, broaden the outlook of our town children in the best possible way, and supply new nourishment[1] to that sense of Nature which is so

[1] I must here express my fundamental disagreement with the demand which is now so repeatedly heard that on these excursions all scientific, geographical, and historical observations shall be excluded. We do not wish to educate men to run through the world like automobiles. Any who have a rational enjoyment of excursions or mountain sports, and whose sense of observation has not been entirely destroyed by our modern school system, will agree with me that the pleasures of an excursion can be admirably combined with those of serious observation.

sadly in abeyance in the town child, they teach the exercise of self-restraint, the acceptance of a certain amount of knocking about, and mutual self-sacrifice, besides giving that physical exercise for which the child will be thankful later on in life. In Munich we content ourselves for the time with three such compulsory excursions for the four highest classes. As far as the scholars do not defray the expenses themselves—expenses which in spite of our modest demands are hardly avoidable in a large town in connection with tram and railway journeys—the municipal authorities come to our assistance by setting aside in their budget a sum which increases with the increase in the number of children at the schools, and amounted in 1911 to about £500. Such excursions can be encouraged by every town, even if it cannot yet make the sacrifice requisite for arranging athletic exercises. They are of no value for the systematic schooling of the body; unless, indeed (as is impossible in large towns), they can be repeated frequently at short intervals. When well conducted, however, they leave for the most part an indelible impression in the heart of the town child who for years to come will long to escape from the prison of the city, and not spend his free time on Sunday in the neighbouring public-house. This is all the more probable if we continue, by such outings, to foster the love of Nature when the child has left the elementary and gone to the continuation school; as, for instance, has been done for more than a decade in the Leipsic continuation schools. The means for this may be provided from the school savings bank in which sums from a farthing upwards may be deposited. In

Munich certain of the industrial associations have recently come to our aid by defraying the costs of such excursions for those entering their particular trade, since I have succeeded in establishing a connection between each trade continuation school and the corresponding trade association. This is a matter for satisfaction because it is also a proof of the sound sense of the employers and is likely to weave a closer bond between members of the same trade. Clearly, the educational value of these excursions depends to a greater extent than that of the athletic exercises on the interest and pleasure which they give to those who take part. It is quite wrong to object that the refreshment room becomes the aim and desire of the children who take part in these excursions. I have undertaken dozens of day excursions with the boys at the higher school where I used to teach, and many of them were so arranged that no inn was visited—or if at all only late in the afternoon shortly before the return journey. I am sure that we all number them amongst the events which even to-day remain fresh and happy in our memories. Unfortunately at our higher schools[1] the desire for such excursions is not strong, and a friendly but energetic pressure on the town authorities or the governments as the case may be would cost but little and have results of the greatest value long after the period of youth has passed.[2]

Besides athletic exercises, games, and excursions, a

[1] At any rate in Bavaria, where I know the conditions intimately.

[2] The newly founded Wehrkraft-Verein was the first to set things in motion. Led by active young officers, some 900 children go on excursions into the surrounding country every Sunday—700 from the continuation schools and 200 from the higher schools.

new form of physical exercise has been introduced into our schools, swimming lessons: and one of the largest towns in Germany, Hamburg, has shown more than mere interest in this question. Owing to the efforts of the Hamburg school inspector, Herr Fricke, permission was given in 1898 by the chief school authority for the introduction of compulsory swimming instruction in his school. The hours for athletic exercise were made to include the practice of swimming movements on special appliances; after which swimming instruction proper was given in neighbouring public baths, and further exercises in diving, rescue work, and artificial respiration. Five years later, twenty-seven boys' schools with 1,814 scholars in the sixth class had compulsory[1] swimming lessons, partly in the two municipal baths, partly in the open river. The question of the extension of this instruction to all the schools of Hamburg is now only that of increasing the number of municipal baths, and since the provision of four further baths is contemplated one need not be a great prophet to foresee that compulsory swimming will hold its own in the Hamburg schools. But even without this prospect Hamburg is at the head of all German towns in its energetic method of dealing with this question. Next comes Frankfort-on-the-Main which introduced swimming as an optional subject seventeen years ago in twenty-one boys' and seven girls' schools during the summer at the river baths. In spite of the voluntary character of the attendance nearly every single scholar took part. Elberfeld, too, has followed the example of

[1] The word compulsory is here to be understood in the sense that all children have to take part, unless parents or medical authorities decide to the contrary.

Hamburg for the last five years; in the boys' schools, which are situated near the public baths, swimming is compulsory and is practised during the time set apart for athletic exercises. Attempts at the introduction of swimming are being made at Berlin, Cologne, Königsberg, Breslau, Leipsic, and Hanover, whilst in Dresden the Society of Athletic Instructors[1] has with the support of the authorities voluntarily undertaken to instruct boys and girls who wish to learn. In the year 1907, Munich joined the ranks of the other towns.[2] There are probably various other municipalities which have also approached the question, but the above examples are sufficient to show that the introduction of swimming has met with an increase of sympathy surprisingly rapid, and particularly in the large towns. The Hamburg institutions, however, show more particularly that the introduction of obligatory lessons is not only possible, but is in no way expensive, since of the £165 which was expended in 1903 on the instruction of 1,800 scholars, £140 has come back into the town's coffers in entrance fees to the town baths.[3]

[1] The admirable specimens of swimming lessons on dry land at the tenth elementary school in Dresden, given by the teacher Max Klähr, won the unanimous applause of the sixth congress.

[2] The estimated cost of swimming in the year 1908—9 was £100; in the year 1910—11 it reached £125. All children in the eighth class took part, and two large winter swimming baths were put at their disposal. Two of the principal swimming clubs took part in giving instruction. In addition during the summer term and the summer holidays children at the elementary schools received free lessons from the teachers at these schools.

[3] The arrangements at Königsberg also entail a very small expenditure. In the year 1901—2 free lessons were given to 714 pupils, and in all 162,000 baths were taken for which the total cost was £180, so that each bath costs less than a farthing.

The objection is not tenable that, with the introduction of swimming, gymnastics receives less attention, for Fricke is quite right when he makes the following observations in his report[1] on the Hamburg elementary schools:—

> "Swimming is gymnastics in the water. Almost the whole muscular system of the body is set in motion, especially all the muscles concerned with bending and stretching the limbs. Strong and regular movement necessitates regular, slow, deep breathing; the chest expands to its greatest dimensions and contracts to the smallest. Thus the air which is strongly inhaled is moist, mild, and free from dust, and reaches to the furthest corners of the lungs. A further result is the strengthening of the abdominal and chest muscles, and an increased activity of the heart and circulation. To these we must add the benefit to the skin, and the practical use of the art of swimming for all who live on the water or are employed on it; and not least its great value for the inculcation of courage, energy, and self-possession."

In face of such advantages gymnastic instructors will hardly be inclined to regard swimming otherwise than as a necessary part of gymnastics. And those municipalities which control public swimming baths and river baths will without any great cost be able to follow the striking example of Hamburg. They will do it all the more easily because the solution of this particular problem finds the greatest support among the public, and because it will bring to the town baths

[1] In "Körper und Geist," No. 5, May 30, 1903.

—which are already necessary in the interests of the general public—a large number of new and permanent visitors, thus providing the necessary financial support for these institutions which are nowadays often not sufficiently used.

If many municipalities regard these claims coldly, whether on account of their novelty, or on account of the lack of suitable public baths, there is a much older claim which no town should deny, namely, that the children should be encouraged in the regular care of their physical well-being at any rate by the provision of shower-baths. Munich, which, until the year 1900 had no public baths, and whose rapid and cold Alpine river gives no suitable opportunity for open-air swimming, has had, perhaps, the greatest experience in this matter. The first school shower-bath was opened on the 1st of October, 1888, in the school in Amalien Strasse. In 1911 fifty-one boys' and girls' schools, with fourteen to twenty classes each, had their shower-bath installation. At these schools about 1,300,000 baths were taken. Since the installation is sufficiently large[1] to allow fifty to sixty children of a class to bathe in the space of *half an hour*, every child can thus take his shower-bath weekly without any especial interruption of the teaching. Every 30,000 baths cost—including interest on capital—£180; so that each separate bath costs the

[1] It includes changing accommodation for 50 to 60 children, in addition to the room for the shower itself, the heating apparatus, scullery, drying-room, room for the attendant, and lavatory. The changing room contains some 50 apartments and a large number of seats. The showers have two or three open standing places with concrete troughs for foot baths. There are also fifteen or twenty special apartments for the elder girls. The walls in the shower room are of marble.

community about 1½*d.* One may assume that the school shower-bath in spite of all objections which were—and to a certain extent still are—raised against it, has in most German towns held its own except where a false prudery has stood in the way. In future it will perhaps find a competitor in the swimming baths, especially in the smaller towns which possess sufficiently large public baths serving the whole population. The value of the school shower-bath is restricted to ensuring the care of the skin, the hardening of the body, and above all cleanliness, not only of the body, but also of the underclothing. It has been a matter of general observation that with the introduction of regular shower-baths the underclothing of the children, which had previously been neglected to an almost incredible extent, became the object of much greater attention on the part of the parents, an attention which was often extended to the outer clothing as well. This education in inner and outer cleanliness alone is a blessing which will not allow even the most backward districts to hesitate in introducing baths in one of these two forms into their schools.

On reviewing the claims which we have so far raised in favour of the care of the body and the moral education which follows in its train, it may appear to many as though the towns, which as it is have many burdens to bear, would be overcome not only by the novelty but also by the very extent of the above demands. I think that a simple example will serve to dispel this fear. In Munich all four demands have met with an attention which—even if not entirely satisfactory—is at least well worthy of notice. Large well-lighted gymnasia and, almost always, spacious

school yards have been put at the disposal of the schools for the gymnastic instruction which each class receives for two hours weekly. Athletic games are encouraged in the schools and outside. The school buildings are with few exceptions equipped with shower-baths; swimming instruction has retained its place; school excursions and holiday games are well looked after; small beginings have been made even for the improvement of the Munich popular fair, the October Festival, by the introduction of gymnastic displays, athletic games, and competitions. It is not uninteresting to compare the expenditure yearly entailed by this physical education with the total expenditure on the Munich schools. By far the largest sum is taken by gymnastic instruction at the elementary schools and the amount paid for this (provided for in the teachers' salaries) was in 1909 £12,500 for the elementary schools, and £500 for the remainder.[1] The erection of four new gymnasia yearly costs £5,000. The upkeep of 36 shower-bath installations costs £5,400, the erection of two new ones per year, £1,500. School excursions and holiday games and so forth cost the community yearly £690,[2] and athletic games £1,750. This made, out of a school budget of £400,000, a sum of about £26,350, of which the gymnastic instruction already obligatory in all towns took almost two-thirds. Whilst, therefore, 93·4% of the total expenditure fell to the education of the mind, only 6·6% was taken for the

[1] Salaries amounted in 1908 to about £160,000. All teachers have 28 hours' teaching per week, and since gymnastics takes two of these its special cost is £11,000. The rise in salaries in 1910 increased this amount to £14,000.

[2] £500 for school excursions and £180 for holiday homes. In 1909 the cost of the latter rose to about £200.

education of the body, in spite of the fact that our provision for the latter was by no means unsatisfactory. The position of affairs to-day is much the same.

In this, however, one factor has not been reckoned: the yearly interest of the building sites and especially of the playgrounds. Strictly speaking the value even of our largest playgrounds cannot be assessed, as they could not be used for building purposes, even were they not playgrounds. Moreover the meadows which are used as playing grounds are not to be valued solely in connection with the education of the young. They are oases in the enormous waste of houses, and no less necessary for the community in general than any other public grounds. They are so important that the Bavarian Government, in order to check in some measure any short-sighted behaviour on the part of building companies, as far back as ten years ago refused to consent to any building plan for new large districts of the town[1] unless 5% to 10% of the land available for building was set apart for promenades and public gardens. Far-seeing officials of Bavarian municipalities will be able here to do much towards the improvement of the towns in general and the physical education of the inhabitants in particular.

Whatever the sacrifices which the town authorities are prepared to make in the interests of physical educa-

[1] The ministerial decree of 26 November, 1898, refers to Stubben, "Hygiene des Stätebaues" published in the "Handbook of Hygiene" by Dr. Weyl, p. 413-424, where for every 250 acres there must be 25 acres of promenade and park, the latter not less than 12 acres. Much more effective than the Bavarian regulations are those promulgated by the Saxon law of 1900, which allows the municipalities the power of recovering the loss of interest on large open spaces from the inhabitants of the houses which enjoy the advantages of situations overlooking them.

tion, there is one means which they should never reject, which I hold to be one of the cheapest and at the same time of the best, and which never fails where it is a question of satisfying the need of the school boy in later life as well. I refer to the extensive *support of those clubs or associations whose only object is the encouragement of games, gymnastics, excursions or swimming*, and which will give the assurance of working in the interests of general education and promise to put their energy into the new duty which *we* give them.

I am now thinking of such associations as the Hamburg, Görlitz, and Krefeld Societies for the promotion of popular games especially among the young, the Schreber club in Leipsic, the Union of gymnastic instructors, the Social Welfare Association in Dresden,[1] the Swimming Association in Hanover, the excellently organised Social Welfare Association in Berg, the Holstein Athletic Association, and many other societies and associations which serve the good of the community and are due to town conditions. I am not blind to the faults and excesses of which associations like the gymnastic clubs, serving the cult of physical exercise, may sometimes be accused. I know that many of them sometimes exaggerate this cult, and turn out athletic monstrosities, world's-record lunatics, and other kinds of muscular Christians, whilst

[1] An arrangement with the Treasury in Saxony has entrusted this Association with the maintenance and control of a large park (Heide park) of between fifty and sixty acres in area. The children's outings in this park, which take place twice a week in the summer (three times a week in the holidays)—in 1906 there were 21 such outings, in each of which on the average 1300 children participated—have proved most beneficial for the poorer children in the town.

at other times their favourite athletic exercise is tankard-lifting ; I know, too, that the yearly programme of many gymnastic associations bears far more resemblance to an amusements' guide than to an educational programme, and that besides their founder Jahn, Father Gambrinus is also held in high veneration as a patron saint. But I also know a number of very useful associations which fully realise their serious duties; and, above all, I am convinced that one can bring such associations into being, if one entrusts to them—with the prospect of support—certain duties which are valuable for the community and give them a responsible position in the ranks of educational institutions. We are far too much in the habit, when questions—especially those of education—arise, of throwing ourselves on the omnipotence of the State and municipal authorities instead of endeavouring chiefly to secure that the general public shall exhibit not merely a passive, but rather an active, interest in general education. If it is true that the best educators are they who gradually make themselves superfluous, then our public educational authorities do not yet rank among them. As on the reorganisation of the whole of the trade educational system in Munich I obtained the assistance of trade societies of all kinds in our work (I may generally claim to-day, with good results), my efforts are also directed to give the better gymnastic associations new tasks in the service of the public, to train them through these same duties, and to support them where their will is good but their financial resources are weak. As soon as such an association is free from the activities of party politics, and its management, its record, and its constitution are such as to give an assurance that it

will honourably promote physical and moral welfare, it will not knock in vain at the doors of our municipality with any request—so far as it is weak and without finances—to have the gymnasia of our town schools opened to it, or when its position improves to be offered the lease or even purchase of suitable playing fields at the lowest prices. Competent demonstrators and instructors belonging to these associations are entrusted with the direction of the games of the scholars, so that the opportunity is offered to many weak associations of obtaining good men in the future for their own purposes as well. On the other hand the associations often place at the disposal of our boys and girls their own fields and their beautiful forest playgrounds. They come gradually to realise that they have great tasks to fulfil; continue their former work with greater seriousness and care; and, last but not least, many of the young people who in this manner come into connection with associations that display a real patriotic sense, are deterred from entering clubs which make the cult of physical exercise merely a lure and a cloak for their other activities. That we have in Germany hundreds of athletic, swimming, and games associations which are ready to make sacrifices for ideals and to take the newer tasks of education on their shoulders, is proved by the report in the Year Book for the Advancement of Recreation.[1] If to-day many of them lean too much towards the side of amusement, it is often due to the fact that they were for so long unsupported in any way, and thus even the capable and honourable element was driven into paths which promised a more rapid increase of membership with its consequent

[1] [See note to p. 222, Trans.]

addition to their treasury. Yet, as I have said, societies for the common good must and can be brought into existence. The best method is to set them suitable tasks and support them to the extent in which they participate in social duties, not least that of civic education. In this way the State and the towns not only save in expenditure, but also help on the work of education, by putting it on a broader basis.

It is one of the greatest arts of administration, and not only of municipal administration, to bring hidden powers to light and place them in the public service. It is also the wisest move for public education authorities to use the thousands of educational forces which lie in independent individuals owing to our social and economic differentiation, to direct them unostentatiously towards a single goal, and only to make actual beginnings, as if on virgin ground, in accordance with a definite point of view and a well-considered system, and where no such forces are already to be found. Nowhere does one find a greater number of educational forces than in the towns, where the community of intellectual interests, a common economic or social need, a common love of art, common pleasures, and many other factors unite this vast mass of human beings, and combine the weak powers of individuals into an effective whole. Thus the towns are, and will remain, the vehicles of the advance in civilisation of any State, not only because the struggle for existence—often increased to an exaggerated extent—tries in the highest degree the mental and bodily strength of the human being, but because they are also forced to the combination of isolated forces. Arm-chair moralists are certainly ready, by pointing to the night life of towns,

to stigmatise them as pestilential growths in the body politic. But they forget that vice lies in the way of virtue; and that no little damage is done because the country pours into the darkness of the towns its mentally, morally, and materially weakest products, who, if the need of bread does not succeed in educating them, contribute more than any other factor to the material and moral misery which is undoubtedly heaped up in the cities. However great be the self-purifying power of the towns, the danger of moral contagion must remain, because not only the human forces whose energy is directed upwards, but also those acting downwards here run together more easily than elsewhere. For this reason it is not sufficient to bring light and air into the wilderness of houses, to improve conditions of property, and to regulate the traffic; the final and most effective method of all municipal economy, as of all national economy, must be a healthy educational policy—a policy which thinks not only of the present day, but is dominated by the permanent idea that the towns must be the vehicles of civilisation, not only for the prosperity of the whole country, but that they may themselves flourish. The riches and power of the most prosperous town fail, if it neglects to steel the character of its inhabitants, and to direct its aim ever anew to the highest ends. Nobody can feel more than I how complicated and costly such an educational policy is, and though I undertook to sketch in a few words the duty of the town towards physical education, I should be the last to value it as a general panacea. Its solution will not of itself lead to a rational mode of life among the population of the town, but the population will not attain

its goal without this aid. Complex conditions may create obstacles or conceal the way to the goal even for the most sympathetic administrators, in view of the small amount of support which, owing to its multifarious conflicting duties, the State affords—although it is so much in its own interests. In this case it would surely be right if in difficult decisions they were guided primarily by the ideal of education, and acted according to the excellent maxim laid down by Carlyle in the ninth chapter of his "Sartor Resartus":—"*Do the Duty which lies nearest thee*, which thou knowest to be a Duty! Thy second Duty will already have become clearer."

CHAPTER XI

THE FIVE ESSENTIALS IN THE ORGANISATION OF HIGHER SCHOOLS[1]

"In critical situations it is character rather than intellect and knowledge that tells. You can make use of the intellect and the knowledge of others, and indeed must do so on account of human limitations—but no one can adapt to his uses another's character."—FREIHERR VON STEIN.

FOR twenty-five years I have been following the struggle of our higher schools for the monopoly in education. This struggle broke out afresh at the time when the Prussian provincial trade schools, the Bavarian trade schools, and the Austrian "Realschulen" extended their instruction in linguistic-historical subjects and were admitted amongst the schools for general education. It was this step which deprived the middle and lower classes, engaged in trade, of their last real educational institutions. At first the aristocracy —the "Humanists"—smiled from their strongly entrenched position at the approach of the revolutionary proletariat—the "Realists." But it was no mere presumptuous claim of a few fuddled faddists, with a false idea of logical training and an inability to

[1] First published in the *Münchner Allgemeine Zeitung*, 1907.

appreciate the hallowed ideals of "Humanism." It was a struggle in grim earnest.

The army of the besiegers waxed ever stronger. The petition of the reformers of 1888 to the Minister of Education had 22,000 signatures, and the Heidelberg manifesto of the aristocracy served merely to fan the flames of revolution. At length the Government were forced to abandon their attitude of cautious hesitation. At first the curriculum of the old classical schools was modified, *ut aliquid factum esse videatur*. In 1890 the famous December conference was held in Prussia under the presidency of the Kaiser. It began with great blowing of trumpets and ended in universal congratulations and general harmony. In the old Prussian "Gymnasium" Latin was somewhat curtailed, German somewhat emphasised, and gymnastic exercises increased to three hours weekly; drawing was made compulsory in the middle classes as well as in the lower, and the leaving examination was simplified. Soon afterwards the Minister, Zedlitz, sanctioned the Altona system (which combined "Realgymnasium" and "Oberrealschule") as well as the "Reformgymnasium" of Director Reinhardt in Frankfurt (which provided all three kinds of higher schools with a common foundation). In Bavaria a single hour a week for natural history was introduced into the five lower classes of the "Gymnasium," and its leaving examination modelled on that of Prussia. As might be expected neither the Prussian nor the Bavarian reforms gave satisfaction. After the changes, as before, the humanistic school alone had the key to all University studies and to the civil service. The struggle continued, but the number of standards was increased by one: besides "Humanism" and

"Realism," the combined (Altona) system entered the field. Finally, after the Conference in June, 1900, the question of "privilege" was settled in Prussia. "In this question," ran the decree of November of the same year, "we start by recognising Gymnasium, Real-gymnasium and Oberrealschule as on an equal footing." "Through the recognition of the equality of the three forms of higher school the possibility is given to each of developing its own peculiar character." As a result the old classical school had to share its monopoly with the two sister institutions, at any rate in Prussia, though Bavaria still lagged behind. The Realists had won the day. The Humanists had yielded in order to preserve their system in its purity.

But the great question—"Is this victory of the realistic schools in the true interests of education?"—still remained unanswered. "Of course," say some. "We have proved it a hundred times, and that was the meaning of our struggle." "Of course not," reply others, "for the value of the classical system cannot be replaced by any other."

This much at any rate is true: the battle was not one about education alone. The question of the privilege of the teacher, the desire for a better class of boy and for the equality of the different subjects, in regard to their position in the eyes of the profession and in the curriculum, played as large a part as that of the privilege of the institution. The teacher in the new schools could now stalk about in the classic toga, and could now aspire to all the glory hitherto reserved for the classical aristocracy. The teacher of geography need no longer struggle only with the lower forms; the drawing-master could bestow the

blessings of his art on the highest class. Now and then I felt that the whole dispute was directed rather from the standpoint of the teacher and his privileges than from that of the interests of education itself, and when to-day I follow the proposals with regard to the new Bavarian "Oberrealschulen" and the way the curriculum is discussed by competent teachers, I regret to find that this feeling gains in strength. Every group of teachers feels itself slighted if it is not granted certain privileges in the new curriculum. The edifice is designed to rest on four central pillars[1]—German and History, Mathematics, Natural Science and Geography Foreign Languages—precisely the four on which the examination for science masters in Bavaria also rests. I am convinced that if, instead of four, there were eighteen such groups, we should have the new school harmoniously constructed with eighteen pillars—though perhaps it would not look so fine as the Temple of Vesta in Rome. When Thiersch advocated, against Schulze, his curriculum for the "Gymnasium," about the year 1826, he was content with one pillar, that namely of classical studies. He thought that the proposals of Schulze, with their emphasis on all-round education, would drive masters and boys to death. Prussia to-day is in danger of losing culture and science altogether through this "steam-engine" method. So great an educationist as Dr. A. Matthias, in the Prussian Ministry of Education, who is like myself a warm supporter of the so-called realistic education granted, in his speech on the social and political signifi-

[1] *Cf.* the supplement to the *Allgemeine Zeitung*, 1907, No. 26 "The Curriculum of the Bavarian Oberrealschulen," by Professor Herlet.

cance of the school reform of 1900, that this criticism, if a little too strong, had been generally justified by the experience of time.

I myself would add that Thiersch will be justified by all future time, not in his advocacy of the *classical* pillar, but in his recognition of the fact that we must have only *one* pillar—whether it be ancient languages and history, or modern languages; whether it be natural science and mathematics; whether it be art, or whether it be technology. None of these great divisions which have not been arbitrarily constructed need fail in that emphasis of the practical moral ideas of perfection, justice, good-will and reasonableness which Herbart considers the foundations of all true education. Each can give us examples and can help us forward in our struggle towards the final goal of all education, towards inner moral freedom.

The most fatal demand which the higher schools have ever had to face is the demand for general, all-round education. What results can be obtained under this system with boys from ten to nineteen years of age? *In omnibus aliquid, in toto nihil.* Education consists in the moulding of an harmonious soul from within, and not cramming it with knowledge. And this moulding must accord with the form of each individual soul, must be adapted to its abilities and its tendencies. It can only be achieved by thought and work, and not by memorising the thoughts of others. You cannot mould all along the same lines without warping and stunting growth. The strength of the old classical schools, if only the instruction be in the hands of the right men, lies in the fact that they lay no stress on the mere acquisition of an undigested mass

of knowledge. They have but one great object, an object which once held captive even the greatest minds; namely, an initiation into the spirit of classical antiquity, and especially into the spirit of Hellenism, as the ideal of pure humanity and moral freedom. Even if many schools lost sight of this aim through striving at the same time to produce "formal" perfection, it was still attained sometimes, and it loomed ever before the eyes of the best philologists of the old school. It is indeed a moot point to-day whether a new ideal should not replace the old, whether national education might not well supplant classical, and the study of natural sciences supersede that of literature. I do not wish to discuss this disputed question. It is of no real consequence here. The vital question is that between a specialised or general curriculum. In order to train the mental and moral powers, which is better:—concentration or dissipation of the available energy? This question has been solved in a practical way by the existence of the humanistic school, with its display of efficiency of nearly a hundred years' standing. The answer is: specialisation. "Thorough knowledge of one subject, and practice in it, produces higher culture than incomplete knowledge of a hundred subjects," said Goethe. Specialisation alone gives opportunity for thoroughness, and thoroughness alone secures true culture.

This circumscribed specialisation of the materials of instruction is the first fundamental requirement in the organisation of the higher schools with a nine year course. I can well believe that a school either of modern languages or of natural sciences, or a technical school, would be of quite equal value with one of the older classical schools; but what I cannot admit is the

value of a humanistic, modern-languages, natural-sciences and mathematical institution, that mongrel production of certain dilettanti with a passion for organising. With such a conglomeration of subjects, all regarded as of equal value, our secondary schools should have nothing to do. Their aim is surely not that the pupil should have received instruction in a thousand subjects before he takes his leaving examination, but that he should have learnt to work seriously, with independence and with honesty, with his whole personality and with devotion to his subjects. We need men, not lexicons. Therefore we need not glance sheepishly at the "Oberrealschule" of the other German States; still less need we study them as the author of the above article would wish. They do not in any way fulfil the requirement of school organisation just laid down.

If the modern schools wish to place themselves in the same rank as the Bavarian classical schools, as they were once conceived by Niethammer and Thiersch, not as they are now administrated in many places, they must content themselves with one basic subject, and must adopt, after due consideration, the well-tested methods of work of the old schools. The easiest to found would be a *modern language school*. Its aim would be to penetrate into the spirit of some leading foreign nation with a rich culture, be it France or England; but not both together. For there is not the same close relation between the culture of France and England as there is between that of Greece and Rome. The mental mastery of both civilisations would exceed the powers of the pupil. As we to-day study our contemporary German civilisation in the light of that of Greece and

Rome, and as we thus begin to understand and love our own, so, through a comparison of the culture of England with that of Germany, the modern language school would offer an exceptional opportunity of distinguishing their bright sides and their shadows, and of learning to value and love not only the foreign culture, but also our own. The school for modern languages would do well to imitate the classical school in essential matters.

Yet a modern-language institution in addition to the classical school, though very desirable, does not seem to me to be unconditionally necessary or urgent. Both kinds of school would appeal to the same class of talent. They would only obtain true results with the rare all-round pupil; with the addition perhaps of those with a talent for language and history, those, that is to say, who are endowed with a faithful and ready memory, a rapid imagination, and an early developed feeling for language. The modern school would, just as little as the classical, be able to do justice to other urgent demands, which are raised on all sides, owing to present-day requirements and the splendid advances in natural science and of technique. The need for a third type of school is here evident—a *school based on mathematics and natural science.*

It cannot be denied that mathematics and natural science form a harmonious combination with a powerful educative force and deep ethical value. It shows great vanity and an entire misunderstanding of all mental development to grant the advantages of logical training only to linguistic studies. So early as 1811, at a time when Gauss was still producing his immortal works in seclusion, Scharnhorst wrote to a teacher in the

Military School at Berlin, "I lay great stress on the thorough study of mathematics, and I look upon this as the basis of all higher intellectual development, and of all other sciences.[1]" Natural science was then in the first stages of its development, yet such a man as Goethe was stirred to enthusiasm by the scientific discoveries of the eighteenth century, which he saw "as one glorious star after another rising before his eyes." But what would he have felt had the treasures of the nineteenth century been disclosed to him? The distorted judgment mentioned above can only be possible with those who know nothing of natural science. One excuse must be allowed them; as the study of natural sciences is pursued to-day, it is of scarcely any educative value, and only in its worthless form is it known to the three sacred hereditary kings of the scholastic monarchy: the humanists and jurists and the theologians. Only thus could they treat it with such levity and have some right on their side. Treated in this way the natural sciences dare not compete with the study of languages which is so well adapted to the inner spirit of the subject. But why does the study of Latin, for instance, display such educative power? Not merely because it is such a regular language from the syntactical standpoint, but also because for long years it has been allowed so many of the school-hours.[2] Moreover, from the first

[1] *Cf* the excellent booklet by Professor Schellbach, "Über die Zukunft der Mathematik" ("The Future of Mathematics"), which appeared over twenty years ago (Reimer, Berlin).

[2] The historico-linguistic group of subjects (German, Latin, Greek, French, History) are allotted not less than 17 of the 25 hours weekly which the classical schools of Bavaria demand for nine years: the mathematical and scientific subjects (Arithmetic, Mathematics, Physics, Nature-study, Geography) get on an average only six hours weekly.

day Latin can be treated with exactitude, for no difficulties lie in the way of the discovery of fallacies either by the average scholar or the teacher. The laws of nature and the principles of mathematics are not less strict than those of language: indeed, they are free of all exceptions.

With languages, the word of the teacher and the printed book supply, at least during school-hours, the materials for work. But in the case of science, lectures and school-books fall completely into the background. During school-hours the chief merit of scientific study is in its method—the ways and means employed in research, and the manner in which it confronts all around it with questions, and teaches us to answer these questions in a manner as objective and broad-minded as possible, under the constant control of experiment. But this research, question, and experiment are not the monopoly of the teacher, they are also the task of the scholar. The teacher's demonstrations must only be introduced in dealing with investigations which are beyond the power of the pupil, or would delay his necessary progress. All other independent research must be the duty of the pupil, and all such work will be done in plain work-shops and laboratories properly equipped. Only in this way will the educative power of the natural sciences be valued aright. Only in this way will they form a mine of culture which will help us to order our lives according to the iron commandments of nature. At the same time an insurmountable obstacle will be placed in the way of that foolish, pernicious, encyclopædic treatment of science which rules our higher schools to-day.

In the same way a *technical higher school* might be

founded, which would display the same educative power as the three others; this would indeed be one of the most interesting modern constructions I can imagine. We labour under the constant delusion that true culture can only be acquired through the pursuit of intellectual studies at the earliest possible age. Yet one can cite numerous examples of truly cultured men, who, through careful work at screw-vice or turning-lathe were faced with ever weightier technical problems, which finally could only be solved by thorough theoretical research. These men found the solutions themselves; and, when they had reached the summit of their creative powers, they displayed a capability and understanding in questions relating to the welfare of the people and the State such as are unfortunately not always to be found with those who have been brought up on book-learning. In the lowest classes of these technical schools perhaps half the hours might be devoted to practical work in the work-shop, the laboratory, and the drawing-hall. In these hours the pupil, under the guidance of first-rate technical masters, could acquire an extensive empirical knowledge, develop his powers of observation, and stimulate his inventive faculties, and, just as in the Latin exercise, secure an excellent training of his attention, his zeal, and his conscientiousness. Higher up the school practical instruction should fall more and more into the background, or, in the top classes, even disappear altogether in favour of those general theoretical problems which arise, ever more numerous, from all serious productive work. Since these problems confront the pupil in his *own* work, they will awaken in him keen and fruitful interest.

I have, with intention, conferred on the three new types of higher schools names which may indicate that they shall, and can, fulfil the same high mission as has, for the last hundred years, been allotted to the humanistic classical institutions.[1] It would be easy to show how our "Real-gymnasium" could embrace the type of modern languages school, the "Oberrealschule," that of a natural science school, our "Maschinenbauschulen," or the lately founded "Technika," that of a technical school. But I must refrain from this. According to the Imperial Decree of 1900, the higher schools shall not be "technical" institutions, though that is how, with the exception of the humanistic schools, they are oddly regarded in Bavaria. Including the old "Gymnasium," they shall be institutions for a general education; and shall, as did once the privileged schools, open up the way to every kind of study that exists.

The four types of school which we have just described obey, in their common principles, the first essential law of all organisation—that the school should rest on one single pillar, that it should lead the way to the attainment of general culture by a training in one branch of learning, of wide range but unified by a single concentrated idea. It necessarily follows that they would also do justice to the second fundamental law of all public educational institutions, a law to which, to-day, insufficient attention is paid. This law is, that *the work prescribed must do justice to the individual gifts of the pupils.* For twelve years I taught in three

[1] [All three have been spoken of in the original as "Gymnasium" with the addition of a qualifying adjective (neusprachliches, echnisches, naturwissenschaftliches).—Trans.]

classical schools and a trade school, and my experience was, in each case, that our educational methods were adapted very unequally to the individual dispositions natural to boys of such widely differing talent. Over and over again I had to see boys of quite exceptional ability for mathematics and natural science being compelled to leave a classical school from the sixth or seventh class, because they did not, and indeed could not, respond with the slightest interest to the study of ancient languages. And what teacher whose work has given him long experience of these things, and who has been sufficiently devoted and open-minded to see in his pupils not only a receptacle to be crammed with his own special subject, but *a whole living boy*, has not observed that strong technical and artistic talent is seldom united at an early age with an equal power of abstract thought? But, in our existing scheme of school-organisation, we choose to close the door to all higher education on children possessed of this talent, which, whether it really is, or only seems to be, one-sided, is nevertheless extremely valuable. For we do not offer them what they really need; and what we do offer them they cannot assimilate. But if we still force them to accept this nourishment which is so opposed to their whole nature, school will become a torture to them and their teachers; and we can consider ourselves lucky if we do not entirely crush out that precious gift with which they have been endowed, their brilliant one-sided talent. But even if we exclude those few whom fortune has so singly favoured, we shall still find that the mass of normal pupils can be divided into at least four main groups: those whose gifts are in an artistic and technical direction; those in whom scientific

interests and ability predominate; those who, thanks especially to an excellent memory, and an early-developed power of voluntary attention, advance with ease along the linguistic and historical road; and, finally, those rare people who possess in equal measure two or three of these combinations. Every school, and not least the old humanistic school, will consider itself fortunate to have the right sort of scholars provided for its own education. Only then will each be able to give scope for the educative force of the group of subjects with which it deals, and no longer have to suffer under the curses of parents and scholars who have nothing fundamentally in common with its ideals.

But I shall now be faced on all sides with the objection: "If you insist so emphatically on the point of view of Thiersch, you must be prepared to face the same reproach of one-sidedness, as was levelled at the old classical school. If the old schools closed their eyes to modern questions, your natural-science school will likewise omit to teach the scholar *nil humani ab iis alienum est*, and your technical school will run a great risk of letting its pupils sink in the marsh of practical utilitarianism. But, above all, the few who are talented in more directions than one will develop one only of their gifts." At the first glance such reproaches seem to be justifiable. But the kernel of Thiersch's proposals, which has been recognised as right, does not lie in the exclusiveness which he demanded. The essential need is for a great, complete, and compact educational practice-ground, to dominate the school. The interests of the scholar will then take firm root in this field; and, thanks to the concentration of his mental powers, he will develop qualities

of constant thoughtfulness, ready imagination, memory, attention, devotion to his subject, carefulness, zeal, independence, courage to attack a subject, intellectual honesty, and harmony of moral thought, will, and action. That is what we ought to understand by true education. But such an organisation does not at all forbid the attachment of subsidiary subjects to the main one. It is only that the centre of gravity of the curriculum does not lie in them. The humanistic school ought in the same way to allow for the inclusion of natural science. Bavaria has done this, but in an unsatisfactory manner; and if her school-directors are wise, they will accept another small correction—they ought also, in the higher classes, to lay a far greater weight upon the understanding of modern German conditions. Both requirements can easily be fulfilled without the slightest departure from their principles, and without loss of their special methods. For a school with such an harmonious curriculum will, owing to the fact that the curriculum is so much less crowded and consequently occupies so much less time, find it possible and necessary to content itself with merely providing stimulation in the accessory subjects. For all those scholars who respond to this stimulus, there remains time to follow their favourite studies further according to their powers. For myself, for instance, the lessons of the higher classes formed not the slightest obstacle to the cultivation of my other intellectual interests to my heart's desire. In the Bavarian classical schools there was, and is to-day, no over-burdening; or, at least, there is none in principle.

In exactly the same way the natural-science school can and must admit languages and history. But here

a great mistake is usually made at the very beginning. People are not satisfied with one obligatory foreign language, to which enough time to allow the pupil to penetrate into the spirit and the culture of the people in question is not given. If the Greeks became, as we all imagine, such a brilliantly cultured race, without paying the slightest heed in their education to the language and culture of any of the "barbarians," who dwelt round about them, there is surely nothing to prevent us "highly-gifted" Germans from climbing with the help of a *single* foreign language to the highest attainable degree of culture. In the demand for two, or even three, foreign languages for this type of school, there lies the inevitable danger of waste and superficiality. If the highest aim of instruction in languages is to be attained—a thorough understanding of another nation's culture and the comparison of it with one's own—limitation is the most urgent demand. Even the humanistic school would probably accomplish more by limiting itself, at a certain stage, perhaps from the beginning of the 8th class, to one ancient language—preferably Greek. At the same time, the pupil could be familiarised by good translations with those works which there was not time to read in the original. In the natural science school there is a second method which would be productive of excellent results—the reading in the upper classes of foreign works on natural science. It is evident that if a boy has received for six or seven years a thorough grounding in natural science, and has also during these years had four or five hours weekly instruction in English and is then introduced to the rich scientific literature written in the English language, he will, as a

result of all his special knowledge and his desire to extend it, welcome the proffered books with a delight quite different from his feelings to-day, when he must struggle laboriously through literature which is frequently quite alien to his mind. If in several of the great English public schools, old Euclid is still read in the original Greek, why should not the German boy read with two-fold advantage, both literary and scientific, Faraday's "Chemical History of a Candle," or Foster's "Physiology," or Roscoe's "Chemistry"? They could be read either in school hours or at home.[1]

It is clear, then, that it is quite possible to answer those perfectly natural objections which arise from a superficial understanding of the first fundamental law, or from a too rigid adherence to that law. It is not only possible, but necessary. For I entirely agree with Goethe's requirement that our education must aim at awakening reverence not only for what is above us, but also for what is around us and below us—for God, for our fellow-creatures, and Nature: and that out of this three-fold reverence, a greater still will arise—reverence for our own selves. So the third essential of school-organisation is this. *Without hindrance to a thorough grounding in the one circumscribed subject which gives its essential character to the school, each organisation must take into account the other interests of mankind and endeavour to unite them intelligently with the main material.*

But, in attending to other important interests, the school runs the fresh danger of losing itself in the

[1] Of course, this assumes that the teacher knows enough English to understand the subject matter—which will be the case with every student of science worthy of the name.

jungle of smattered erudition. It must not be forgotten that the best thing the higher schools can ever do is to provide a strong stimulus to the development of the power of real intellectual work. The rest depends upon the talents of the pupil and his own free choice of work. I consider any school a radical failure which does not allow a boy freedom to devote himself to artistic or scientific occupations as well as his official school-work. I would even maintain that the educational value of the organisation of instruction in a school can be tested by finding out whether its scholars in the higher classes devote themselves of their own inclination to any work not required by the school. The number of hours of instruction need therefore not depend upon the selection of subjects considered necessary from the point of view of general education; on the contrary, the selection will be decided by the number of hours prescribed, as a matter of course, according to the demands of health and education. A long experience in many different sorts of schools leads me to believe that the Bavarian humanistic schools with their average, during nine years, of 24 or 25 obligatory lessons in the week (including drawing, but not gymnastics or singing) have not exceeded the absolute maximum. The lower classes need not have so many hours as this average; the higher, to make up the sum total, may have more. If one school-year be not burdened with too many subjects to study, it will be quite possible to organise the work with this time-limit. As soon as it becomes necessary to attack the foundations of a new subject, and more time is urgently demanded for this purpose, it will be advisable to round off one of the subjects taught in the preceding class, or at least to defer its obligatory treatment for a few years, or altogether.

Everyone who has busied himself with serious intellectual work knows how beneficial and salutary is the concentration on one subject at a time. Unfortunately, we have accustomed ourselves in our scholastic organisation so to divide up the subjects that we are hardly ever in a position to give our pupils any really thorough knowledge.

But not in this way alone should scope be given for the spontaneous creative desire of the pupil. We must also allow at least the more gifted and industrious a certain latitude in their obligatory work. This amount of liberty need not retard the attainment of the common aim which the school must keep constantly before its mind. For instance, I can well imagine that a pupil would be encouraged by the reading of the Annals of Tacitus to familiarise himself with the other extant works of this author, who has remained indelibly in my memory since my own school-days.[1] Might a boy not be excused from the preparation of another Latin book and certain Latin school-exercises on the condition that he will give an exact account, at the end of term, of his reading? Or might not a similar concession be made in the upper classes of the natural-science school if a gifted boy wished to carry out some extended experi-

[1] I speak here from my own experience, the reading of the third book of the Annals, ab excessu divi Augusti, like that of the Electra of Sophocles, has left, in spite of an interval of 35 years, an indelible impression in my mind. I felt no impulse to read Plato's Apology after the Electra or the Odes of Horace after the third book of the Annals: I was only ready for them when I had mastered the other tragedies of Sophocles and the rest of the Annals! Even to-day, when my thoughts wander backwards, these plastic old pictures, with the complex feelings they involve, rise before me again: just as they once so enthralled my soul that teacher and class-room vanished from my vision.

mental work? I believe all these things are not only possible, but also exceptionally valuable in educational interests; and several years ago Dr. Matthias gave evidence of a wide discernment of the true educational methods along this line. After all this deliberation, I reach my fourth main demand: *Every organisation shall take into account the pupil's own free educational impulses, as well by a certain limitation of the obligatory hours of work as by allowing a certain latitude in the performance of that work.*[1]

The fundamental laws which we have already laid down are derived from our whole conception of education. They are necessary, and, with suitable teachers, they are sufficient, to assure the success, in nine-year higher schools, of the boys' serious efforts towards mental and moral culture. But mental culture alone, even if the complete training gained by it in certain qualities of will and character be included, cannot possibly be the final goal of our schools. It gives no guarantee that the lad whom it has equipped will serve with all his powers the community which, by its institutions, has made it possible for him to enjoy the advantages of such culture. In his Republic, Plato placed all education and instruction at the service of the community, that it might form a wise, reflective, just, and courageous State. In this State the best educated and the best-bred were to be guardians and

[1] There is nothing more contradictory of this demand than the mechanical way of fixing the number of hours which I have lately observed. The number of hours worked weekly in nine years (say in an "Oberrealschule") in Prussia, Württemberg, Baden, Alsace, Braunschweig, etc., is added together, and the resulting average decides the number of hours required by the corresponding school in another State!

rulers. Their combined intellectual and moral culture was to be at the service of one great ideal, the development and maintenance of a healthy State. I believe that we can ask nothing better of our higher schools. For such higher schools should supply the guardians and directors of the State, the leaders in war as in peace. But if we do not model our educational system according to this aim—if we encourage pursuit of knowledge only for the sake of knowledge, if we encourage only learning in our higher schools and do not also inspire knowledge of the living structure of the modern State, its duties and functions, if we do not seek to awaken courage, boldness, truthfulness, and self-responsibility in the pupil—we shall breed, not *servants of the State*, but, at the highest, serviceable, judicious *civil-service officials* whose correct work, obeying the letter of the law, will not only nominally be in the service of the community, but in reality in the service of their "chiefs" for the time being, or, still worse, in the service of their own interests.

Our higher schools, in opposition to the primary and middle schools, are in the happy state of requiring no new material in their curriculum for the promotion of insight into the spirit and the duties of the whole State. Literature and history, and, not least, the natural sciences, afford knowledge and understanding of this in abundance; and the long years devoted to mental training easily allow the formation in a boy's mind, through the material at the master's disposal, of a clear idea of the State-organism, and of the rights and duties due to its nature. But it cannot be denied that the higher schools, including the humanistic, have neglected this duty until now. The pupils in a clas-

sical school know a great deal more about the organisation, rise and fall of the Greek and Roman States than about the social and domestic relations of our own country to-day. Still more unfavourably situated are the pupils in other types of schools, for they lack even a comprehensive idea of the States of antiquity. Even if we possessed a few higher schools, where, thanks to the insight of the teachers (not of history alone), the scholars could enter into the world with a clear idea of the community into which they are received, that would be far from sufficient. It is a mistake to think that patriotism can be taught. It is just as impossible as to "teach" religion. "You can bring the horse to the water, but you can't make him drink," say the Americans. Only the man who really loves his country can, even in peace, bring intellectual, personal, and material sacrifices to the altar of the nation: the making of voluntary sacrifices cannot be learnt by words, but only by deeds. So we shall have to order our higher schools in such a way that the pupil will learn to act in the service of others.

To this end it is above all necessary to found our education not, as we have done until now, on *mistrust*, but on *confidence*—that we should give much more opportunity to the pupil of self-government. Perhaps I may give a little example. When, twenty-two years ago, I undertook of my own free will the teaching of natural science in the five lower classes of the classical school at Schweinfurt, the State did not make any grant whatever for this subject, though the headmaster set great value on its study. So I lacked many appliances: apparatus for mineralogical research, materials for experiments, zoological and botanical collections. I

immediately started a system of small fines for those numerous little acts of forgetfulness, about which teachers make such an extraordinary fuss with their pupils. A treasurer chosen by the pupils was in control of this. He had an assistant with whom he could discuss matters, and he referred the proposals for the purchases to me before carrying them out. For the formation of collections in each class, officers were chosen from those boys who were most interested in natural science. These officers then chose soldiers, and each company had special duties; there were, for instance, butterfly, cock-chafer, and snail brigades. There were battalions for rosaceæ, liliaceæ, and cruciferæ, for metals and for ores. The soldiers did the work; the officers inspected, made decisions, and gave orders. Others were chosen to direct the collections. As soon as possible, I founded sections for gymnastic games, in which I took part just like the pupils. It is hard to imagine what industry was shown in all the classes, how one boy worked for another and sacrificed his own interests, and how happy we were together, scholars and masters. Could not school-libraries be controlled in the same way? Could not the organising of any entertainments be, in this way, the business of the pupils? I went for more than a hundred country excursions with my pupils in my twelve years of teaching. How many higher school teachers deign to go even one walk with their scholars? Yet are not such excursions to-day one of the best means for the training of self-sacrifice, independence and courage? But how many of the teachers in our higher schools favour them? How much self-responsibility and feeling of duty would not be

disclosed in the upper classes of our schools if there were only a little more elasticity?

We must, however, not only be teachers, but friends and comrades of our pupils. The boy does not gain strength of character by the reading of the classics and the comprehension of Nature's unchangeable laws. His character is mostly influenced by that of his masters and his fellow-pupils. If the teacher is a servile sort of man, the boys will acquire the same attitude, as long as it is not so exaggerated as to arouse their mockery. But if he is aglow with feeling for the common life, and with the spirit of self-sacrifice, manliness, and justice, such a frame of mind will also take possession of the pupil whose heart will be kindled by the flame before him, as the parched steppes are kindled by the burning brand. If we organise our higher schools, like the higher English schools, in such a way that we can mould the character of our scholars according to our own characters, we may be confident that they will also fulfil the fifth and last condition in the organisation of all higher schools—*that they shall train, in reality, as well as in word, "citizens" of the State.*

I believe that in the five essentials of organisation which we have described, nothing has been maintained to which any serious objection could be raised, though much that we can in no way see fulfilled to-day as yet. All our higher schools in Germany, with the exception of the Bavarian classical schools, suffer from a superabundance of, and inner lack of coherence in, the subjects dealt with. We still lay far too much stress on the cultivation of the intelligence, and too little on that of the character. Yet thought itself, objective

thought free of passion, is absolutely impossible without strong moral character ; and we all know that an intelligent beast may be much more dangerous than one which cannot think. The professional educationists still quarrel, with hundreds of misunderstandings, about the educational value of their respective sciences, yet we know that every serious profound study is of equal value for the most important side of our education —for the education of character. We know, too, that there are hundreds of proofs at our disposal to show that the training of logical power is possible in every serious science.

"The voice of the majority is not the test of right," said Talbot to Queen Elizabeth ; committees may possibly test and discuss the individual subjects, as regards their practicability, but no conglomeration of subjects can form an organically built work of art, complete in itself. All they can make is an unseemly patchwork.

CHAPTER XII

THE TRAINING OF TEACHERS

WHAT do we mean by the training of teachers? In order to answer this question I will first look back forty-five years and relate an episode of my life. I had completed my twelfth year and therewith, according to the law of that time, completed my necessary schooling. A friendly adviser of my parents, Dr. von Ramp afterwards Bishop of Passau, offered to bring me into the boys' Seminary in Metten on the Danube that I might become a priest. "How long must one study there?" was my first question. "Twelve years." I was against it. To sit at school twelve long years—I could not bear it even in thought. A friend of my elder brother, a wholesale merchant in Cologne, had a great desire to take me into his business. He talked with me for a few days and showed me the world as it stands open to the capable merchant. "Must I sit all day long in the office?" "For the next six to eight years, yes." "Then I would rather not." There was one other calling for which the necessary preparation entailed little loss—the teachers' profession. When I heard that only five years' study were needed I at once settled on my career.

Only five years' study, thought the innocent boy! Here are the separate heads of all that I had to learn in this five years of teaching and learning: Church History, Bible History, Dogmatics, Universal History, Political, Physical, and Mathematical Geography, History of German Literature, Composition, Grammar, Arithmetic, Algebra, Plane and Solid Geometry, Caligraphy, Drawing, freehand and projection, and Sketching, general Pedagogy, History of Pedagogy, Teaching, Psychology, Zoology, Botany, Mineralogy and Geology, Chemistry, Physics, Anatomy and Physiology, Piano, Organ, Violin, Singing, Harmony, Agriculture, and Gymnastics.

Shortly before the completion of my seventeenth year I left the Seminary without having suffered any real harm through all this pressure; at least, physically. Mentally I remained quite at a standstill.

For about a year and a half I tried to continue this training. I learnt Stöckhardt's "Text-book of Chemistry" by heart without making one experiment. I further loaded my memory with a popular psychology without making my pupils the subject of even the least observation, until suddenly, I know not how, the crisis came. Within a few months I was seized by a hunger for knowledge such as I had never before known, though I see it again to-day in hundreds of teachers. Just as a Dachshund creeps to the sunlight in the winter months so I sought light for my knowledge. A hopelessness took possession of me: my decision matured rapidly. A tutorship which was offered helped me to it. In order to burn all boats that would make a return possible, I asked straight away for permission to resign

from the elementary school, and gave no reason whatever. It was granted within eight days. Now the nineteen and a-half year old youth who had matured almost overnight from a boy to a young man, who had once rejected more prosperous callings in order not to have to learn too much, began to drink like an infant not at the thirty-six founts of learning which the Seminary had offered, but at one alone — that of classical antiquity. After one and a half years he succeeded in passing into the second highest form of a classical school, and two years later in entering the university with a very good certificate. I chose for my study the most exact of all sciences, mathematics, but I remained true to my calling, although the economic circumstances of my parents, which at that time were much better, gave me the choice to pursue any other. I had only one ambition—to be the best teacher in the best school in the land.

Now forty-five years have passed. The tide of education has swept onwards meanwhile, and still the waves rise ever higher. There is no class in society that has not in the meantime deepened or widened its educational foundation. In the year 1909 new kinds of higher schools were created even for girls, whose scientific education had hitherto been so cruelly neglected. The arrangements for teachers' training alone are like fossils washed up out of the past history of civilisation into the alluvium of the present. Here and there has been added a year's training, here and there a branch of study more or less thrashed out; a little Latin, a little French, a little manual instruction, a little stenography added to the thirty or thirty-six other little things,

here voluntary, there obligatory; but in all essentials the monster has remained the same. Yet among teachers, at any rate the best, the cry for true education becomes ever louder. I know of no profession which has so many members hungry for knowledge as that of the teacher—but I know of none which, thanks to its wretched preparation, is exposed so entirely to the modern abuse of education as this. Broken in to memory-cramming and unpractised in independent criticism it listens to every new bird that is bold enough to warble borrowed tunes with its own exquisitely original technique: for inexperience is the mother of admiration. Only in the great cities where, thanks to the universities the stream of education flows in a deeper bed, do the best find what they strive for. But here, too, their preparatory instruction would be a disadvantage; and here, too, I have constantly observed how those desirous for the gold and precious stones of science fill all their pockets to bursting point with treasures under whose burden they can struggle no further, instead of grasping after a single diamond whose bright light might ever illumine for them the path of true knowledge.

But the task of the elementary school and the elementary school teacher becomes ever more formidable and more important. Ninety per cent. of all citizens of the modern State have in the elementary and continuation schools the only foundation of their mental training. It should give them, besides occasional family and vocational education of rather questionable value, the direction for life; it should give them the chief and strongest weapons in the struggle for existence; it should instil into them an understanding of

their future rights and duties in their country, for the comprehension of their calling as workers and citizens. But its power does not suffice; for, apart from the fact that it is incompletely developed, it is to-day, on account of the inadequate preparation of the teachers for their complicated duties, managed in a way which prevents it from exerting that educational influence which it might otherwise possess. When shall we open the doors to the needs of the age?

Meanwhile one ought not to indulge in too many complaints before trying to understand the problem. Even with the highly cultured Greeks the teacher ranked beneath the slave. Heracleitus was once asked to recommend a good teacher, and when he called attention to the fact that the cost would be about 1,000 drachmas, the man answered: "Are you out of your senses? For that sum I can buy the best slaves!" In spite of John Locke[1] and Rousseau,[2] who thought that a good teacher could not be valued too highly, this view prevailed until the eighteenth century. When the foundation of elementary schools first became a

[1] John Locke says in his "Thoughts Concerning Education," § 92:—

"In this choice [of a tutor] you must be as curious as you would in that of a wife for [your son]." "I dare assure you, that, if you can get a good one, you will never repent the charge; but will always have the satisfaction to think it the money of all other the best laid out."

[2] Rousseau explains in his "Émile," Book 1, § 69:—

"I believe that a father who realises the value of a good teacher will soon give up his search for one. For it will cost more pains to obtain one than to become one himself." And in the same book, § 67, he says, "An educator—truly a noble soul! In order to produce a man one must either be a father or more than a man. And yet such an office is calmly entrusted to mercenaries!"

State concern, the position of teacher was given to those who would take least, and, as even then there was a shortage of numbers, village herdsmen and retired soldiers were pressed into the service. For whoever could keep a herd of cows together or manage wild unruly soldiers could surely subject a roomful of children to the discipline necessary to drill into them reading, writing and arithmetic! Such was the early conception of the elementary school, but Pestalozzi effected a complete revolution in our views of its functions and of the training of its teachers. Andreæ,[1] too, in his admirable essays on the training of elementary school teachers, writes: "At the very threshold of this training we must seek the roots of that evil, retarding, and confusing influence, which dogs our training colleges even to-day, that chequered multiplicity of curriculum, which not only overburdens them, but also threatens to set a mass of vacillating tendencies in the place of deeper interests. For instance, the institution, conducted by Dinter at Dresden at the end of the eighteenth century, gave instruction in not less than twenty subjects, including the elements of Latin and French; but, apart from music, only the course in the art of questioning reminded one of the lessons in a specialised institution.

As more attention is devoted to the problems of education and teaching, after the appearance of the constitutional State or of complete democracy, as the consciousness of the necessity of civic education develops, at any rate among the best philosophers and educationists, and as the results,

[1] Rein's "Enzyklopædisches Handbuch der Pædagogik," Vol. VII, 1st Edition, p. 1045. Hermann Bayer, Langensalza.

well-managed training and a well-guided education, begin to assert themselves—so much the more does the necessity of better provision for the training and status of teachers force itself to the front. One cannot say that present-day Governments do not at any rate accord to the training of teachers a very much greater importance than those of a century ago. I am, indeed, convinced that if this burning question could only be separated entirely from the many other problems which always come up for solution at the same time, we should be a good deal further in the matter than we are to-day.

But apart from ultra-conservative views which still move in the narrow grooves of previous centuries, there are two main obstacles in the way of a more rapid solution of the question—the clerical supervision of the schools, and the problem of finance. For the religious inspectors it is troublesome to find in the various country parishes at the side of the spiritual curator of souls a worldly curator and adviser established with precisely the same privileges. Consequently they will not support anything that affects the training of teachers which might increase the demands for equal rights, even where they are by no means otherwise hostile to a better training. The ecclesiastical supervision cannot, however, last for ever. In many States it has now disappeared entirely; in others the clergy are ready to give way as soon as the State wishes them to do so. This obstacle will, consequently, diminish of its own accord.

The second difficulty, however, will be harder to cope with. A broadening or extension of the training of teachers requires, above all, an extension of the period

of training. This naturally involves the demand for a considerably higher remuneration, and will require conditions of promotion similar to those in prospect for the other servants of the State or the municipality. The question of the training of teachers, of salaries, of promotion, are bound together in the most intimate way. This connection explains the very slow progress made in these matters. Until the matter of salaries is settled, to grapple with the teachers' training question would be a misfortune not only for the teaching profession but for the country as a whole. It would take the more capable and economically independent teachers away from their colleagues, lead them to occupations with better material prospects, and, in consequence of the considerably increased costs of training, would result in a shortage of teachers, to the inevitable detriment of all popular education. Anybody who has earnestly interested himself in questions of education, who knows the true disease from which our modern States are suffering, and who realises that this disease can only be cured by a thorough education of the people, to enable them to make use of their economic, intellectual and social freedom—every such person will follow with interest the question of the training of teachers, and, if he is in a position to work for it, will do everything which lies in his power. But in so far as he has the whole in view, and not only a part, he will always remember that this difficult question can only be solved step by step. The wish may precede, like the gales of spring, but we can only follow its direction slowly. We must grasp as much as the moment allows, in the hope that the next generation will strive to advance matters yet a stage further.

But what *is* possible at present? I reply, a school which gives real education, and not simply a mass of memorised knowledge. If it is objected that such an education is provided by a higher school, we must yet (even if the obstacles which I have dealt with above did not exist) first of all raise the question whether these schools, as they are organised to-day, do always give a real education; and whether, even if they do, the direction they have to follow is not, for our purposes, a great detour: whether there is no shorter and more suitable way to real education. But we need not answer the question here, because to-day, whatever answer it may receive, the proposition does not seem to me to lie within the bounds of possibility (and, I may frankly add, of desirability).[1]

We are accustomed to-day to distinguish between special schools and schools of general education, but chiefly on the purely external ground that the first group prepares for one occupation, and the second for several. In this way we are accustomed to connect with the schools of the second group the view that their educational value must necessarily be higher than that of the first. This habit simply arises because, as a matter of fact, the majority of the special schools, having developed from the most primitive beginnings, are kept within narrow limits on grounds of economy. But there is no real reason why one should not also arrange most of the higher special schools so that their educational value might equal that of the school of so-called general education—especially the teacher's training colleges, for if any kind of special training

[1] I have moreover subjected this matter to a close examination in Chapter XI. of this book, to which I may here refer.

is likely to inculcate a broad human view, it is certainly the education of teachers conceived in the proper spirit. If any subject of instruction can establish intimate relations with all possible branches of knowledge, or encourage the soul to range of its own accord over the whole field of human experience, it is certainly that concerned with the up-bringing of the human being. I can therefore even imagine a humanistic training college whose humanism should not fall behind that of any higher school in existence. I would ascribe that welcome impulse in teachers, the desire to improve their work, in no small part to the fact that everyone who is thus occupied, and who is really inspired by his great task, finds himself forced directly to develop his understanding and character as far as his talents and circumstances allow.

In the meantime, not only the outward, but still more the inner, circumstances force us to hold fast to the vocational school. In the first place it is an undeniable fact that educational questions make no appeal to a young man, so long *as he is not practically concerned with them.* Many thousands of teachers in higher schools leave the universities every year without having interested themselves in any way with education problems. They are quite other things which occupy the philologist, the mathematician, and the student of science during his university life. He will and must master his subject in the first instance, and since each one of these subjects extends over a very wide field he has plenty to do in order to do justice to his impulse. Only because here and there questions on education are set does he condescend to go to a suitable

lecture, if by chance such a course is delivered at his university. At the Modern Languages Congress, 1906, Director Dörr of Frankfurt said in his report on the Course of Education for Modern Language Teachers: "As long as a man does not teach himself, he has hardly any interest in, and still less understanding of, educational questions." He points to the assertion of a University teacher who declared, "I have examined in the educational examinations for twenty-seven years, and have long ago convinced myself that the study of pedagogics in the University is worthless." Professor Rudolf Lehmann in his excellent book, "Erziehung und Erzieher,"[1] holds the same view as Dörr.

From my personal experience I can confirm all these assertions. The mental attitude of our elementary school teachers, who go to the University after the completion of their special training and devote themselves earnestly to the science of education and psychology, is entirely different from that of masters at the higher schools. Thanks to their specialised education, and above all to previous *practice in teaching*, they know the difficulties of many educational problems, and their minds are prepared to approach these problems in as broad a spirit as possible. If it were feasible to-day to abolish the vocational school for elementary school teachers, and to make their training like that of the teachers at higher schools, the same danger would in general threaten the elementary school teachers. Indeed, the result would be inevitable if the elementary school teachers were, in addition to their own special duties, to devote themselves to one of

[1] Berlin, Weidmann, 1901, p. 311: Second Edition, 1912.

those branches of study which in all universities now occupy the future master in the higher schools.

Moreover an early vocational training would have no less value than the so-called general education. Indeed, I have already shown that it can be even more valuable, given certain precautionary measures.[1] The view often associated to-day with vocational training, that it is mechanical, restricted, and one-sided, only implies a false idea of education, which is perpetually confused with knowledge.

Real education implies susceptibility to all things human, surety of judgment, independence in understanding and the carrying through of a task, and harmony of intellect, will, and method. It is only concerned with knowledge in so far as these four qualities demand it; and the more these qualities are developed in a man, the better is his education. Every complete and definite field of activity in which they may be developed leads to education. There are few fields of work where this would be more applicable than in that of educational training itself. Why, therefore, disdain the schools responsible for the historical development of the training of the elementary school teacher? Perhaps because a great number of those who have attended this school do not recognise the truth of the view we have been advocating: but I believe they will be forced to recognise it, if we prove our point by a suitable organisation of vocational education for elementary school teachers.

But what is this suitable organisation? We have already worked out the first fundamental maxim: first of all, it must not depend, as before, on unconnected

[1] *Cf.* Chapter II. of this book.

knowledge in the greatest possible number of subjects, but *must concentrate essentially on one single subject that is in itself a complete and compact whole.* Only by confining ourselves to *one* subject do we gain sureness of judgment, and confidence in carrying out our work; and only so can we realise those manifold problems which render us sensitive to everything human, and develop a discernment which will determine our will and actions. Only in this way can we realise effectively that training of the personality which for a teacher is all important—much more important than systems, technique, and psychology. Just because the art of education is of the nature of a practical art, like the art of medicine or of war,[1] the personality of the teacher means much more than any system of rules or of technique. This fundamental maxim, that

[1] There is a widely spread opinion that pedagogy is an art like the art of literature, of painting, or of sculpture. But the business of the artist is, to fashion the contents of his own soul with most simple means in a characteristic way. The sculptor, for example, can thus fashion the stone according to his imagination, but not the teacher the living soul of his pupil. On the contrary, he should not wish to give it a form alien to its nature. The educator is rather to be compared with the leader of an army, who on the field of the soul of his pupil carries on a war in the service of ethics. His troops are those characteristics of the pupil which are of value for his ideal of education, the enemy are those who oppose the ideal of education. The task is to conquer the latter or at least to make them innocuous. In order to win the separate battles the leader must not only be acquainted with all the methods of warfare, he must also know the ground on which the battles will be fought, must always keep his own troops up to their full strength, lead them into well-protected positions, spy out the position and power of the enemy, and wait for good opportunities of attack. This is the "art" of education. Only a part of it—the art of instruction—has here and there something in common with the art of expressing one's own soul.

instruction shall be confined to one definite subject complete in itself, is applicable not merely to the teachers' training colleges, but to higher schools which claim to impart true education.

But in the case of teachers the demand for completeness and compactness can only be satisfied by concentrating on the sciences of education, physiology, psychology, and ethics.[1] These must take the lion's share of the hours in a training college with a three years' course, in connection with the nearly related subject, literature, German and foreign, and extensive practice in teaching. By the side of this main field of work a subsidiary subject, which guarantees a strict intellectual discipline whilst continuing the course of the preparatory school, and is distinguished by its exact methods, will be necessary. This is all the more obvious since neither educational science nor ethics, nor even psychology, have so far developed exact methods; nor will they be able to develop them for a long time. Such a subject of work would be mathematics or some branch of science, such as physics. All other subjects required[2] must be confined to preparatory courses, and finished there. The extended

[1] I cannot at present agree to reckon æsthetics among these auxiliary sciences. Apart from the fact that its scientific development seems yet more questionable than that of pedagogy and ethics, I see so far no way leading from the æsthetic valuation of the form to the æsthetic valuation of action.

[2] Excluding religion and technical subjects such as drawing, music, and athletics. I would allow throughout the three years of the training colleges for the educational sciences, say, four hours per week; literature, four; work in the science laboratories, three; religion, two; drawing, music, and athletics, nine; thus giving thirty hours per week in all (including all practical work), of which, perhaps, twenty would fall to new theoretical instruction.

educational practice guarantees continuous repetition and improvement.

In the case of gifted pupils, allowance can be made for further needs by the addition of optional instruction in laboratories or workshops, or in foreign languages. Anyone who is inclined to complain of the above restrictions should consider that the continuation of the subjects dealt with in the preparatory course, as is customary to-day, entails this, and also the disjointedness which we all lament, and which never does, and never will, further the cause of true education. If the teacher, after leaving the college, wishes to take up one of his favourite sciences, together with pedagogy, at the time when he is preparing for his calling, he should learn to probe as deep as possible. A man who in *one* intellectual field has learned to work earnestly, thoroughly, and assiduously, and to realise the satisfaction of true mental progress, is proof for all time against the dangers of a superficial smattering of learning. Let us bear in mind that the auxiliary educational sciences (physiology of the sense organs, psychology,[1] and ethics,[2] together with the history of education, which will have to be treated in its widest range, as well as general pedagogics and the theory of instruction proper) already form six distinct subjects, even if they are very nearly related. These can well occupy the mind of the boy between

[1] Psychology should take more or less the simple form which William James gave it in his twenty lectures for teachers.

[2] Ethics, perhaps, after the excellent model of Paulsen, which also includes the important account of the forms of social life, the family, economic life and society, the essential features of the State—its origin, constitution, the extent and the bounds of its functions.

the ages of 16 and 19, even if only the salient features are dealt with. In addition, it is essential that, as in the humanistic schools, the educational classics be read, such as the two first books of Quintilian's "Art of Oratory," Montaigne's "First Book of Essays," Fénélon, "L'éducation des filles," Locke's "Thoughts on Education," Rousseau's "Émile," Pestalozzi's "How Gertrude Teaches Her Children," Jean Paul's "Levana," and the writings of Herbart, Schleiermacher, or Waitz on the science of education. The whole work should be critically examined from the standpoint of modern psychology and pedagogy, as regards its claim to solve important questions. The chief fault of our modern teachers' training colleges (apart from certain exceptions due to the influence of some personality) is that, for want of time, they only talk about the Classics, and let their pupils memorise outlines of education from Plato to Ziller without helping them to enter as far as possible into the *spirit* of a great work, and so to develop and strengthen their judgment.[1] If the preparatory schools were what they should be, one could even give the better pupils Quintilian, Fénélon, Locke, or Rousseau, together with a good translation, so that they might at the same time continue the linguistic studies which were theoretically concluded in the pre-

[1] In this—at least in the examples which I have given here—complete, not arbitrarily expurgated school editions, should be used. The same applies to the instruction in Ethics and Psychology for which the students at present are given amateurish books which are often by no means clear, and generally bristle with false assertions and proofs. Only in this way can one arm the young teacher, so that he may be protected from the harmful effect both of numerous popular works and of books clothed in the garb of science, to which he will otherwise be delivered up bound as soon as he leaves the college.

paratory schools. I do not consider special instruction in history any longer a necessity for the training college, since *the history of education, if rightly taught, raises the most important historical questions of itself.* On the other hand, it is not merely useful but distinctly desirable to read literary works belonging to the period from the appearance of Lessing to the close of the nineteenth century, with parallel literary and historical observations; if only because more psychology and pedagogy will be found in the works of great poets than in many so-called "scientific" works. Such a homogeneous syllabus would certainly give the tyro the best chance, and furnish the best preparation for the great task of educating the people. *Of course a teacher, like any other man, will later have to face dozens of problems which require new knowledge and fresh intellectual effort.* But must he not already do that to-day, in spite of the indigestible mixture with which he is forced to cram his mind? Does the young teacher of nineteen really know anything? How many rely on what has been crammed into their memories, and would they not work much more easily on any strange subject if they had once learned to work thoroughly in some one single field? Everyone who takes the training of teachers seriously, who knows what great tasks are before the teaching profession, and anyone who has learned for himself how true education is attained, must combat shortsightedness and give preference to quality over quantity, both in matter and treatment. None will be happier than the teachers themselves, and all their pupils, when this has been realised in practice. A plan of this kind would, at the same time, satisfy a second

fundamental demand. Every school organisation seems to me defective which does not allow the youth, in addition to the subjects he is compelled to take, to choose for himself, on his own initiative, any piece of work, scientific, technical, or artistic, for energetic and thorough study. The introductory course to the college I have outlined should, in the interests of thoroughness, finish the theoretical work in a number of subjects, such as mathematics, the greater part of natural science, and the foreign languages. It is probable that, if preparatory education has done its duty, many will be anxious to pursue some favourite study of the preparatory school in the college itself. There are two subjects which find special favour with boys when properly treated—work in physics and chemistry, or foreign languages. Care should, then, be taken that such scholars can follow their inclination. Advanced lessons in foreign languages should be introduced as a voluntary subject, and it should be made possible to continue obligatory work in natural science outside the hours allotted to it in the curriculum. Since that curriculum only provides a modest amount of time for science, and since the various branches of science are closely related to one another, time and energy will remain to pursue a self-chosen study. That is not merely of great value for educational development, but also for the training of character. A man who works only under compulsion does not gain nearly so much in character as one who lays burdens upon himself. Nothing is so infectious in a school as work which is voluntary, and which therefore interests the whole boy. When one of my scholars in my classical school asked me to provide him with

a little apparatus for chemistry and mineralogy, in order that he might imitate and complete my demonstrations at home, six or eight others followed his example a few months later, and all held loyally together and helped one another in their work. I am sorry to say that, in consequence of the oppressive numbers of different compulsory subjects, we have no idea in our higher schools how many forces would be brought into play if we did not always work so mistrustfully in educational strait-waistcoats. But even if comparatively few would interest themselves in the voluntary subjects, for which official provision had been made, yet others would by this plan surely have a valuable opportunity in compulsory subjects of over-stepping the required minimum, whether in drawing, in reading, in music, or in athletics. I consider it a criterion of the work of the teaching profession—how far it is in a condition to awaken voluntary effort.

But supposing the training college arranged on our suggested plan, we are confronted by yet a third requirement. Our demand has been that, in the interests of a thorough education, the number of subjects dealt with shall be restricted to a definite continuous field of knowledge. This demand compels us to exclude subjects which later will be important not merely in teaching, but also for the development of the man himself. The subjects which we have mentioned are suited before all else to bring the teacher into touch with the human element in life, or, to quote Herbart, to cultivate the "threefold circle of sympathetic interest." Therewith we come naturally to the demand that the preparatory course must attach the greatest weight to the "threefold circle of empirical interest."

So here, too, we secure a definite sphere of work, that of mathematics with natural science. The best that we could wish for here would be a six years' course in natural-science, to be begun after the completion of the tenth or eleventh year. It would be a school organised like the humanistic six-year course of to-day, only with the difference that it would have as its central feature not ancient languages but mathematics and natural science.[1] Every "modern" school could easily be changed on these lines, since we need only forbid the introduction of a second foreign language, and can allow the voluntary hours to be given to natural science in order to make this group of subjects the central one.

This proposition is to-day of little importance because the authorities in general still retain, and must continue to retain, the three-year preparatory schools, which begin after the completion of compulsory attendance at the elementary school. We shall have to concern ourselves therefore only with making natural-science predominate in these schools. With the *abolition of foreign languages*[2] the road would be

[1] I may refer here once more to Chapter XI of this book.

[2] The organisations of six-course teachers' training colleges in Germany, outside Bavaria, have for the most part for several years a few hours of instruction a week in a foreign language. I find that they thus take away time from the thorough treatment of other subjects without attaining any appreciable result in the foreign language. Possibly the comprehension of the mother tongue gains something through this: but such a roundabout method of increasing the power of expression in the mother tongue, if possible at all through learning a foreign language, seems very unsatisfactory, for the real advantage of a foreign language—the introduction to a new culture with all its treasures—is entirely left out of consideration.

easy. If we allow eight hours weekly for natural science, including practical lessons, lasting for two hours, and six hours mathematics, then the fourteen hours thus accounted for permit the requisite thorough study, and maintain the right equilibrium. If about four hours for German, and two hours each for history, geography and religious subjects are added, then the school has three graduated yearly courses with not less than twenty-four hours weekly of instruction proper; and of these, two are devoted to laboratory work in natural science. The remainder can be allotted to gymnastics, drawing, and music. I know very well that agreement is not easily attained with regard to such a division of the curriculum. Everybody has his own opinion. But my proposals are designed only to give a sort of picture of the way in which the requirements for an adequate training of teachers can be fulfilled, without transgressing the fundamental demand that the subjects dealt with shall be definite and self-contained, and that the varied nature of the teacher's future work shall not be overlooked.

Exactly this variety has hitherto been the rock on which the organisation of the training colleges for teachers has generally come to grief. It is not necessary for the teachers at the higher schools. The philologist only needs his ancient or modern languages, the mathematician only his mathematics, the natural science teacher only his natural sciences: the teacher of history and geography needs, in addition to these subjects, only that knowledge of German literature which is also expected of his colleagues. But the elementary school teacher must be equally well versed in all spheres of knowledge, even if far more super-

ficially than the specialist! If we are not to make all true education impossible we cannot force everything into the official curriculum. Much must be left to the diligence and enthusiasm which are generally to be relied on after the completion of the course at the teachers' training college. The task of this institution is only to give a good foundation, and to stimulate interest: except in the case of educational science, where all should be as thorough as the time and talent of the student allow. But we shall always be able to do justice to the chief demand if we give a broad basis to the preparatory schools in natural science, and to the training colleges in the science of education. At the beginning of his career, the teacher will then not only be able to work thoroughly, independently, scientifically, and with his heart in his work, but will also be in a position to acquire those qualities the possession of which I consider so essential:—clear understanding of the work-plan of the elementary schools, and of the purpose and meaning of the separate subjects in relation to the whole object of education, a realisation of the aim and material of education, and of the development of the child-mind; and a warm, self-sacrificing devotion to the child, combined with a firm character, and based on a lively sense of the duties of citizenship.

For the widening and deepening of this knowledge and the coveted mastery of foreign languages later life offers time enough. But there is one thing which the young teacher cannot realise too seriously, and which from the very beginning is absolutely necessary for the welfare of the children entrusted to his charge:—and that is what Geheimrat Münch demanded of the

teachers of the higher schools at the Modern Languages Congress at Munich, 1906, "Everything depends on the new teacher comprehending the psychology of his pupil. The technique of teaching is not the most important thing, but an understanding of the development of the child's mind." I would add, "And an affectionate, cheerful personality with a real joy in life." To this end we must make every attempt to turn the training college into a preparation for education in the true sense of the word.

APPENDIX I

THE SCHOOL SYSTEM OF MUNICH.

SINCE January 1st, 1907, the schools of Munich controlled by the Municipality have been organised in four groups.

1. *The Kindergartens* (Attendance optional for children between the ages of three and six, with a monthly fee of two shillings per child).

2. *The Elementary schools* (obligatory, and free,—for boys and girls from the end of the sixth to the end of the fourteenth year).

3. *The Continuation schools for boys.*

(*a*) *For apprentices* (obligatory and free throughout apprenticeship, though not beyond the eighteenth birthday, for not less than three years from the time of leaving the elementary schools: with an average of eight hours instruction weekly).

(*b*) *For journeymen and master-workmen*[1] (Optional, after attendance at a special school for apprentices. Fees are payable).

4. *The Continuation schools for girls.*

(*a*) *General Continuation school* (Free, and obligatory for the two years following attendance at an elementary school. Three hours weekly, generally on Wednesday from 2 p.m. to 5 p.m.).

(*b*) *Extended Continuation school* (Free but optional, for two years with six to ten hours weekly, on week days before 6 p.m.).

[1] [See note to page 132.—TRANS.]

In the autumn of 1914 both the above schools will cease to exist, and their place will be taken by a *compulsory continuation school for girls:* with a two years course of at least six hours a week. Every girl not attending a higher school will then continue her education at this school on the conclusion of her eight years at the compulsory elementary school.

The *Kindergartens* were (apart from a few controlled by the municipality) until the beginning of the year 1907 in private hands, and managed by the Kindergarten Association. The municipality, however, generously supported them from the beginning, especially by erecting premises for them in every new school building, by providing large playgrounds, and by contributing towards the payment of salaries. In 1910–11 there were twenty-eight kindergartens in buildings belonging to the town, attended by about 3,880 children, some of whom of course made use of them only for a short time, perhaps only for a few weeks. The total expenditure for these twenty-eight kindergartens amounted to £5,175, of which £1,550 was met by fees. By the first of January, 1907, the municipality had assumed control of all kindergartens, so that for the future they will form an organic part of the public educational system, like the *écoles maternelles* in Paris.

THE ELEMENTARY SCHOOLS.

The organisation of the Elementary Schools is based in its essentials on the statute of the winter of 1869/70, when the chief requirements were already fulfilled :—a special inspectorate, the curriculum suited to the needs of the town, a system of classes with seven (to-day eight) divisions, free education, the extension of the compulsory principle to all classes of the community with no separate schools for the well-to-do, selection of teachers by the town authorities, and guarantee of adequate salaries and pensions. An important characteristic of the system is the attendance of *every social class in the same school.* Out of 43,231 children between

the ages of six and ten in the whole city only 396 were receiving private education : that is to say 1 per cent.

Up to the end of the nineteenth century there were seven graduated classes in the elementary school for boys and girls alike, attendance being compulsory, for seven years only. In the autumn of 1894 for boys, and in the autumn of 1896 for girls, a voluntary eighth year was added and became compulsory for boys in 1907 and for girls in 1913.

The curriculum has been twice altered during the 44 years intervening since the original statute, first in 1880 and again in 1900. The second arrangement is based on the principle that the treatment of the various separate subjects must keep always in view one single end, the education of the future citizen ; and in order to attain this object, the material was selected, and its treatment prescribed in such a manner as to render possible the encouragement of the elementary civic virtues, independent work and creative power, and the development of productive capacity in a spirit of perseverance, thoroughness, and conscientiousness. With this in view, many buildings have been provided with school-gardens, aquaria, and terraria ; and in particular school excursions are encouraged. Moreover, the instruction in drawing was remodelled, in order that visualisation might be given due prominence ; and more important still, thorough manual work in well-equipped workshops was included in the eighth year course, and practical experiments in chemistry and physics were introduced, and connected with the cookery lessons for girls. Since the autumn of 1907, about half the time in the eighth year class for boys has been devoted to constructive manual work.

In the eighth year class and the continuation school for girls, the whole of the instruction centres round domestic economy, the nutritive value of different foods, the house, clothing, and the upbringing of children. I regard this as so important that

I would describe as aimless all civic education which fails to train girls for their special duties as mothers. I cannot understand how our authorities can hesitate on this point. When it is a question of horse-breeding, the means are readily forthcoming: even for the problems relating to swine special assemblies are held: but when we come to the question of enabling women to bring up their children properly—heads, hearts, and purses remain closed.

To illustrate the way in which, besides this training of the will and character through practical work, the cultivation of the intelligence is also provided for, I may give as an example the *history* lessons, as they are taught to the four top classes. The object of these lessons is to give the pupil a clear idea of the chief epochs in the development of his country, so that he may later come to a right understanding of the functions of the State, and of its political, religious, and social institutions.

To this end the material is grouped in three main divisions each of which is assigned to a school year. The fifth year course includes:—the foundations of the Christian-Germanic culture, with the four sub-divisions: the Germans and their battles with the Romans, the introduction of Christianity among the Germanic peoples, the age of the German Kings, the Hohenstaufen and the Crusades. For the sixth class the main subject the development of the German people itself, with the subdivisions: The Rule of the Landesfuersten, the age of discovery and invention, era of the Reformation, the age of Louis XIV. For the seventh year the chief study is the Renaissance of the German Empire, with the divisions the age of Frederick the Great, the age of revolution, the age of discovery and invention. For the study of history in the eighth class the subject assigned is the New German Empire. It begins with the subdivision: "A German City (Munich)," and continues with "A German Federal State (Bavaria)," whose historical development

as Duchy, Electorate and Kingdom is then passed in review. Finally comes a consideration of the Constitution, which closes with the subdivision: "An Alliance of German States (the German Empire)" whose internal growth since 1871 is traced in its historical setting.

The separate titles of the main theme and its subdivisions form a guide for the selection and treatment of suitable material belonging to it. As in the case of history, so for all other subjects, each year a subject is prescribed, definitely conceived and working in the direction of the main object as we have explained it, and within these limits teachers may move with freedom. For the selection of matter the maxim holds: as little as possible and as thorough as possible.

Particular attention is given to the instruction in *natural science,* whose character in our elementary schools I should here like to consider a little more in detail.

The essence of this instruction does not lie merely in obtaining well-ordered knowledge of which the pupil has need for the independent ordering of his own life as well as in his vocation, but also in the schooling of his thoughts, actions and will. He who has learned to think as a student of nature has learned once and for all, and nothing characterises the significance of the scientific study of nature better than the circumstance that nearly all the branches of human knowledge which have to-day the character of sciences, have proved amenable to its methods.

Two things are necessary in order to attain this end.

In the first place a far greater restriction of the subject matter than has formerly been regarded with favour. For observation and comparison demands time, much time. Where one object tumbles along after another no possibility is given for a thorough observation. But since other subjects may rightly demand their place besides natural science, the time necessary for observation and comparison can only be

obtained by restricting the matter taught. At the same time a system of this kind demands also the provision of such opportunities of observation as are afforded by school gardens, terraria, aquaria, excursions, laboratories and workshops. The latter especially are indispensable for a thorough interest in nature, because nothing inculcates the habit of independent observation and comparison more than practical work.

Our curriculum prescribes the aims as follows: it shall introduce the pupil to nature in such a way that he may observe the simple processes and laws affecting natural phenomena, and can understand them and apply them in his own moral rule of life. This demand contains no reference to any definite quantity of knowledge.

The chief value is placed in the educational power of natural science, and if the teacher follows this aim he will certainly equip his pupils with a modest amount of knowledge as well, though this is left, as a rule, to the teacher.

The final goal is that of all education—the making of a good citizen. The scholar must learn to apply the code of nature to his own moral code. Each single school year, too, has its own definite aim, and all converge in the direction of the ultimate ideal. In biology, the chief task of the fifth year is to introduce the scholars to the simple elementary phenomena in the form and life of organisms. The sixth class has chiefly to develop the simple fundamental laws; the seventh must introduce the pupils into the mutual relationships of natural phenomena. In following up the three chief tasks an exhaustive treatment of the three divisions of nature is not attempted. The fifth class obtains its fundamental ideas from the vertebrates and from plants with leaves resembling the lily and rose. The sixth class considers some simple laws derived chiefly from the study of insects. The seventh class learns the mutual relationships subsisting in certain insect communities.

Mineralogy and chemistry are only dealt with in so far as they must furnish the conceptions most necessary in order to understand the life of plants and animals. In each class of either sex, two hours per week are devoted to this instruction; for the most part they have at their disposal school gardens, aquaria, terraria, aviaries, insect and caterpillar boxes. Only a few old schools in the centre of the town have no gardens.

In the seventh year—that is, two years later—systematic instruction begins in physics and chemistry. In connection with this, in both the higher classes for boys, two hours' practical work weekly are included, besides the theoretical instruction. In the seventh class the lessons in physics deal with the elementary laws of statics and the fundamental facts of heat (expansion, etc.); whilst to the eighth class are allotted optics, acoustics, and electricity, with some consideration of the nature of work.

In chemistry the task is restricted for the seventh class to the conception of combination and dissolution, and its application to the processes of life; the eighth class deals with acids, bases, and salts, and their practical application to mineralogy and to commercial questions.

The culminating point of the whole instruction in natural science is formed by the lessons in hygiene of the eighth class. The practical work of the boys in physics comprises quantitative work, chiefly measurement and weighing; the practical work in chemistry, on the other hand, is chiefly qualitative, and intended to lay the foundation on which the pupils in the compulsory continuation school may follow with success the courses in hygiene and practical technology. In the girls' classes the instruction in physics and chemistry takes the form of lessons in housekeeping, in that the teacher—for eight hours weekly, of which four hours are devoted to theoretical and four to practical work in the school kitchen—introduces the girls to the conceptions of physics and chemistry which lie at the

base of the demands for a rational system of diet, housing, and clothing. It will be seen from this that in the eighth class also the highest aim of all education is kept clearly in view. There was not so long ago a group of educationists who would hear nothing of laboratories, workshops, and school kitchens. He who stands aside to-day would be converted if he would come and witness a course organised from the broader point of view, and not merely stuck aimlessly into the curriculum, but forming an organic part of the life of the school; and would observe its advantages for teachers and pupils alike. Quite apart from the fact that it forms the most natural and simple way to avoid overburdening the curriculum, it also develops in a large number of pupils that indispensable joy in activity and construction which in theoretical work is so often sought in vain. It is a matter of general agreement in the elementary schools in Munich that not a few boys and girls who, during the first seven years, are regarded as lazy and untalented, suddenly open their hearts and develop astonishing powers, with which no teacher would have credited them, as soon as they are given practical work in the workshops, laboratories or school kitchen. There is in my opinion no doubt that in our elementary schools we turn much too early to abstract thinking, even before its necessity has arisen in the children themselves. That such pupils do not participate in our reflections need not astonish us; they wake up at once when we give them a sphere in which they may exercise their faculty for concrete thinking.

The system of providing laboratories for natural science will only be able to make slow progress on account of the increased costs which it involves.

But what does even increased cost mean when compared with the enormous educational value which is latent in instruction arranged in this manner? The more heated the competitive struggle of modern nations, the more important does it

become that a man should not only learn to work, but learn to work independently—that he should not merely *know* what is most important, but be able to put his knowledge into practice. Practical ability and independent work are not to be learned through oral instruction. For this an early practical schooling is alone of value, and alone puts us on the way to true culture. No subject, however, in all our elementary schools is more suited to open up this path than natural science, which, moreover, has the advantage hardly shared by any other subject, that the majority of the pupils take from the very beginning the greatest interest in its lessons. In opening the door of our elementary schools to natural science we give the pupil the strength to acquire those characteristics which its method alone can develop. We do not merely give him great chunks of knowledge in such a way that he will sooner or later forget them if his occupation does not force him to utilise or to increase them. We give him something very different—a certain manner of thinking and acting, and a certain independence withal. We teach him to prepare a given material for observation, to investigate the life of man and of nature, to weigh all circumstances and to be conscientious in judgment and conclusion. We foster the virtue of objectivity, which is equally valuable in the intellectual and in the moral life, and without which the highest virtue of mankind—justice—could not be conceived at all.

Of the relation of the various subjects to one another in the curriculum, which in spite of all opposition obtained the approval of the Ministry in August, 1911, the following scheme gives the best picture.

Just as the instruction in the laboratory for physics and chemistry, as well as that in the school kitchen, was placed in the service of the training of the will, so also in the singing and drawing lessons the ideals of artistic education have been especially kept in view in the last few years. By the side of the compulsory

drawing and singing lessons, optional classes have also been arranged.

In autumn, 1906, a Central School of Drawing was established for especially talented children from seven to fourteen. It was attended in the year 1912 by twenty-five boys and girls for four hours per week. Even eighty years ago a Central School for Singing, whose first director was Francis Lachner, had been organised. It is open to all children above ten years of age and devotes four hours a week to artistic singing. In the year 1912 it was attended by about 1,600 children, divided among thirty-two classes in all parts of the town.

An examination must be passed before attendance at the Central Drawing School, but not at the Central School of Singing.

For some years arrangements have existed for theatrical performances for the elementary and continuation school children; whether they will be permanent for the elementary schools has yet to be seen. According to our experience so far, elementary school children do not seem to be sufficiently mature for such performances. The performances in the Royal Odeon in the large central school for singing, which includes music from the folk and cradle-songs to the strictest form of motet and choral, bring our children into touch with the best music. Otherwise there are no special concerts for school children at present.

In the autumn of 1911 the first reading room for children was opened in the school in the Alfonsstrasse, which is more than filled daily. In autumn 1912 a second followed in the Simmernstrasse. Both are managed by women's associations. The town provides premises, heating and light.

The lay school authorities are, in Bavaria, unfortunately denied any influence on religious education, which on the whole still follows the methods laid down four hundred years ago, on the one side by Canisius and on the other by Martin Luther. If it were not

CURRICULUM IN THE MUNICH ELEMENTARY SCHOOLS.

Subject.	I.		II.		III.		IV.		V.		VI.		VII.		VIII.	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1. Religion	2	2	2	2	4	4	4	4	4	4	4	4	3	3	2	2
2. Language:																
(*a*) Conversation	(*a*)	3/2	(*a*)	3/2	—	—	—	—	—	—	—	—	—	—	—	—
(*b*) Etymology and Phonetics	(*b*)		(*b*)		1	1	1	1	1	1	1	1	1	1	—	—
(*c*) Reading	(*c*)		(*c*)	7/2	4	3	4	3	3	3	3	3	3	3	3	2
(*d*) Composition	(*d*)	11/2	(*d*)		2	2	2	2	3	2	3	2	2	2	3	2
(*e*) Writing	(*e*)		(*e*)	4/2	2	2	2	2	1	1	1	1	1	1	—	—
3. Geography, History, etc.:																
(*a*) Observation Lessons	4	4	4	4	—	—	—	—	—	—	—	—	—	—	—	—
(*b*) Knowledge of home and district	—	—	—	—	3	3	3	3	—	—	—	—	—	—	—	—
(*c*) Physical geography	—	—	—	—	—	—	—	—	2	2	2	2	2	2	1	1
(*d*) History	—	—	—	—	—	—	—	—	2	2	2	2	2	2	2	1
(*e*) Nature-knowledge	—	—	—	—	—	—	—	—	2	2	2	2	5	3	6	5*
4. Arithmetic and Geometry	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4
5. Manual instruction:																
(*a*) Writing	—	—	4/2	4/2	2	1	2	1	—	—	—	—	—	—	—	—
(*b*) Drawing	—	—	—	—	—	—	—	—	3	2	3	2	3	2	4	2
(*c*) Singing	1	1	1	1	1	1	1	1	1	1	1	1	1	1	—	1
(*d*) Gymnastics	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
(*e*) Handwork	—	2	—	2	—	3	—	3	—	3	—	3	—	4	4	4
(*f*) Cooking	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
	22	23	23	25	26	27	26	27	29	29	30	30	30	30	32	30

* Of which three are devoted to matters concerning the household.

that the family plays the chief part in this education, the elementary school would probably, as a rule, have no cause to be proud of its results.

The biological lessons are designed in the first place to arouse the necessary intelligence and understanding for questions of hygiene. School excursions, athletic games, shower baths, skating, gymnastics and swimming instruction have to take over the practical side. In the (school) year 1911–12 (cf. also page 230) 177 places for round games were provided, with 162 responsible teachers on forty-two playing grounds varying in area from three-quarters of an acre up to fifteen acres at a cost of £1,500. In the same year 1,342,000 school shower baths (about twenty per child) were given at a cost of £8,200.

The swimming instruction has only been run on regular lines since 1905, by the co-operation of swimming clubs, to whom yearly fees decided on by the managing committee are paid. In the year 1911, lessons were given to 960 children, of whom 85 per cent were successfully trained. The expenses were £123.

For school excursions £500 were then set aside in order to allow even the poorest children to participate. The number of excursions was 8,030, and the number of classes 1,300, so that the number of excursions per class was about six.

In winter 1909, twenty-four in 1912, twenty-one of the playing grounds were flooded and used by the children for sliding and skating free of charge.

A part of the social work is done in the homes for boys and girls maintained by special societies; and during the midday interval, according to their needs and wishes, the children are given soup with some meat and bread. In the year 1911 there were 22 centres, in which 362,481 portions of soup at 10 pf. (1¼d.) were distributed. The average number of applicants daily was 1,561. In the holidays the boys' friendly fund arranged special holiday funds for uncared-for children to which the municipality

contributed during the year £250. In the course of the school year 19 boys' friendly funds for about 1,030 boys were opened, as well as 10 for the girls, providing for about 500 girls; these are for the poorer children, and are in various schools all over the town. During the winter months about 250 children daily received a warm breakfast.

School materials were only given free to children without means to pay. In the school-year 1911–12 they were provided by the municipal authorities to 9,329 children without any charge. This involved an expenditure of £2,150, of which £1,225 was later recovered. Many parents enter their children provisionally as requiring free materials, but in the course of the year are able to pay the necessary expenses.

Children leave the Munich elementary schools for the higher schools at the end of the tenth year. As a general rule we may say that of the boys in the fourth class 12 to 14 per cent., and in the fifth class 8 to 10 per cent., enter the higher schools. The number of girls who leave before the end of the thirteenth year is very small (in the fourth class 2 to 3 per cent., and after the fifth class only 1 per cent.). Hence the elementary school is the school attended by almost all girls in Munich between the ages of six and thirteen.

For backward children we have special classes as in other towns. In 1905 there were nine such classes with 193 pupils, in 1909 sixteen classes with 322 pupils, in 1910–11 twenty-one classes with 426 pupils, distributed through eight school buildings. For those who have attended for the compulsory eight years without reaching the top or eighth class there are special "leaving classes" in certain parts of the town.

A further parallel division on the lines of the Mannheim system is not at present contemplated, though the idea is not to be rejected off-hand. My long and careful investigations into the development of

the capacity for drawing[1] in children between the ages of six and fifteen shows that amazing differences in capacity and production exist even where all are treated by exactly the same method. And the same is no doubt true of other subjects. Children differ from one another in their mental and artistic endowments no less than in their physical qualities: the difference between the worm and the eagle is not more striking! And since this is the case a division according to talent has its justification the moment we know the correct methods by which to estimate the degree of talent; and not only in intellectual matters but in all that concerns art, the will, and the feelings. We are very far from such knowledge to-day, but in principle such an organisation of the elementary school would do as little harm as our elementary school for all classes in the community which is attacked by Ries of Frankfort.

The total expenditure in the Munich elementary schools amounted in 1909 to £330,000 for 68,000 children. A single child costs therefore about £4 10*s*. In 1912 the cost was increased, chiefly owing to the rise in the teachers' salaries, to £425,000 for about 70,000, bringing the cost of each individual child to £6. In this latter figure, which would otherwise be £5 4*s*., the cost of new buildings in 1912 is included.

In 1910 an experimental class (followed in 1911 by two others) was arranged in the interests of the self-activity idea; about these the Appendix to my little book,[2] "The Idea of the Industrial School" (Macmillan 1912), may be consulted.

[1] "Entwicklung der zeichnerischen Begabung." (Carl Gerber, Munich, 1905.)

[2] "Begriff der Arbeitsschule." (B. G. Teubner, Leipzig, 1911.)

THE CONTINUATION SCHOOLS.

See also Chapter VI where an account is given of the development of the Munich continuation system. The photographs opposite pages 314, 316, 318, *and* 320 *show four typical Munich continuation schools.* —Trans.]

THE trade continuation school system is now essentially complete, and is divided, as I have already mentioned, into two principal groups: the compulsory section for apprentices from the fourteenth to the eighteenth year, and the voluntary section for master-workmen, and journeymen.

Nine thousand two hundred and twenty-four apprentices in the town of Munich are divided among fifty-five separate trade continuation schools, viz:—

For metal work, 17 Schools:—Smiths and fitters for the building trades, art smiths (4); machine builders (3); craftsmen in delicate machine and mechanical work (1); mechanics, fine mechanics and gunsmiths (3); smiths and wheelwrights (2); jewellers, gold and silver workers (1); plumbers, gas, water and electric light fitters, and metal-spinners (1); clock and watch makers (1); tinsmiths (1).

The figures printed in brackets show the number of the kind existing in Munich.

For wood working, 7 Schools:—Carpenters and cabinet makers (4); wood turners (1); coopers and caskmakers (1); sculptors in wood and ivory (1). In four separate parts of the town there are also divisions for carpenters and cabinet-makers.

For the building trades, 7 Schools:—Bricklayers and carpenters; sculptors in stone, stucco workers and stone masons; potters, stove setters, workers in porcelain and earthenware; upholsterers, painters, decorators and paperhangers; decorative painters; chimney sweeps, glaziers; painters on glass, porcelain and enamel.

For the graphic trades, 4 Schools:—Lithographers; photographers; half-tone zinc engravers; book-printers and compositors.

For the food and provision trades, 6 Schools:—Bakers (2); butchers, confectioners, inn and restaurant keepers (2). The bakers and inn-keepers have each a division in separate parts of the town.

Clothing trades, 4 Schools:—Shoemakers; tailors and furriers; elementary surgery, hairdressers and wig-makers; tanners and glove makers.

Agriculture and vehicular trades, 2 Schools:—Gardeners; cab and taxi-cab drivers.

Paper and leather work, 2 Schools:—Bookbinders and cardboard workers; saddlers, trunkmakers and glovers.

Shopkeepers, 2 Schools:—Druggists, grocers and colourmen; other businesses. The latter school is divided into four parts: banking, grocery, textiles, paper and leather goods

Other trades, 3 Schools:—Musicians and students of music; engrossers and notaries' clerks; dentists.

Most of these schools have their own central buildings, of which two are in the east and west of the town; the central school building in the Liebherr Strasse and that in the Pranckh Strasse serve solely as continuation schools. The two others, in the North on the Elisabeth Platz, and in the South on the Gotzinger Platz, have to share the building with an elementary school, though separate rooms are used. Each trade continuation school has its own workshops, and practical work is introduced in each curriculum.

The remainder of the young people who were obliged to attend a continuation school amounted in 1906, 1907, and 1908 to about 1,000, divided as follows into three groups:—

(a). The apprentices of a definite trade, who are, however, not sufficiently numerous (at least twenty) to form a trade school of their own (this is the smallest group); (b) youths in unskilled trades; (c) those who since leaving the elementary school have not adopted

CONTINUATION SCHOOL FOR COOPERS.

any trade at all. In the years 1909, 1910, and 1911 their numbers rose to about 1,100. For these ten "general" continuation schools have been set up in different parts of the town. Even in these "general" continuation schools, in accordance with the decision of the authorities, provision was made for instruction in drawing and manual work and for workshop practice, as well as gymnastics, civics, and hygiene. At the suggestion of a teacher in an elementary school, however, the board abolished the instruction in drawing and manual work after the Ninth Congress of the German Continuation Schools. All that could then be attained was its introduction in an experimental form in four of the general continuation schools. A more recent decision of the authorities in August, 1909, has, however, permitted the introduction of instruction in handicrafts in all general continuation schools. I have no doubt that instruction in handicraft, so long as it is of a good, sound, trade character, is excellently suited to be a means of training for general continuation schools. In any case it is, as a rule, far more attractive than reading, writing, or arithmetic, for those who, partly through their own fault and partly for other reasons, have not yet entered any trade. It also does a good deal to help such young people to get into some skilled trade. An intelligent educational policy must try to prevent young people of fourteen from earning their living as casual labourers, errand boys, etc. The greater number of them will lead unhappy lives, for they have learned nothing to help them in their battle.

The apprentices' divisions of the fifty-five trade continuation schools are organised on the following principles:—

The education in trade efficiency must take account of the purely technical, the mercantile, the civic, and the business side.

It must include the apprentice, the journeyman, and the master-workman.

The trade education of the apprentice by the employer needs supplementing by means of the continuation schools or schools run by the trade guild.

Where guild schools exist by the side of continuation schools both must in all cases be united into one corporate school.

The continuation school must, however, not have a "general," but a purely trade school character, and consequently, where circumstances allow, the continuation school must be classified strictly with some trade.

The attendance at these trade continuation schools is compulsory for the apprentice during the whole of his apprenticeship, or as a minimum for three years after he has left the elementary school. For journeymen and master-workmen, attendance at the journeymen's trade schools and master-workmen's courses, which form part of the trade continuation schools, is voluntary. The course at journeymen's schools should be, at least, for one session; the master-workmen's courses may be even shorter.

The organisation of trade education, including that of the trade continuation schools, must be so arranged that it does not tend to drive the pupil out of his manual occupation.

For this purpose and to extend the often one-sided teaching of the master-workmen the establishment of school workshops for the particular trade work is absolutely necessary in every continuation school.

Where instruction in workshop practice can take the place of drawing it should be allowed to do so. Otherwise drawing lessons are, as far as possible, to be linked up with workshop practice.

In all trades in which the teaching of drawing is bound up with practical work the former should be so restricted as only to serve practical needs; as, for example, a working drawing for work to be carried out in the workshop, or a design for the artistic treatment of some real material where the details will be developed in the material itself.

It is not only in the interest of general, but also in

CONTINUATION SCHOOL FOR TAILORS.

that of trade education, for the highest class of boys in the elementary school to be made familiar with careful manual work in close connection with the drawing lessons.

For the trade education of journeymen and master-workmen, schools of handicraft are necessary in which education in drawing, art, manual work, economics, and citizenship is given in voluntary continuation courses, but even in these handicraft schools workshop practice should replace drawing where possible.

In order to foster the artistic industries an education of the public is also necessary, and must be cultivated by means of periodic exhibitions and appropriate lectures.

The town is divided into four continuation school districts, each of which has its own continuation school building with the requisite teaching rooms and demonstration workshops, a meeting and exhibition hall, a collection of material and specimens, and a library.

The compulsory course comprises at least eight hours per week of literature and business composition, trade arithmetic and bookkeeping, lessons on materials, tools, and machines, civics and hygiene, drawing and practical work. Apprentices of those trades for which drawing and practical work have not been introduced attend for at least six hours weekly; in addition, the law of Bavaria enforces attendance at religious instruction. The whole of the curriculum must be adapted to the needs of the particular group of trades.

After seven o'clock at night no compulsory lessons are to be given; the attempt must be made to have all in the daytime, and to keep Sundays entirely free. The trade continuation school teaching is to be entrusted to permanent trained teachers.

Handicraft and technical lessons in the eighth class of the elementary school and in the continuation school should be undertaken by master-workmen from the trades, who may be engaged as permanent teachers if there is sufficient employment to justify it. The instruction in voluntary classes should be partly an extension of the subjects taught in the compulsory

schools, partly of the nature of supplementary lessons in other subjects. Attention must be paid to the combination of athletic games or gymnastics with the continuation school subjects.

The whole course, and particularly the workshop arrangements, must, where possible, be made to allow a certain amount of self-government among the pupils. Only in this manner can the consciousness of responsibility—so necessary in later life—be enabled to develop in a practical way.

Those boys under the age of eighteen who cannot be drafted into any of the existing trade continuation schools should be placed in the separate continuation schools known as "general" continuation schools.

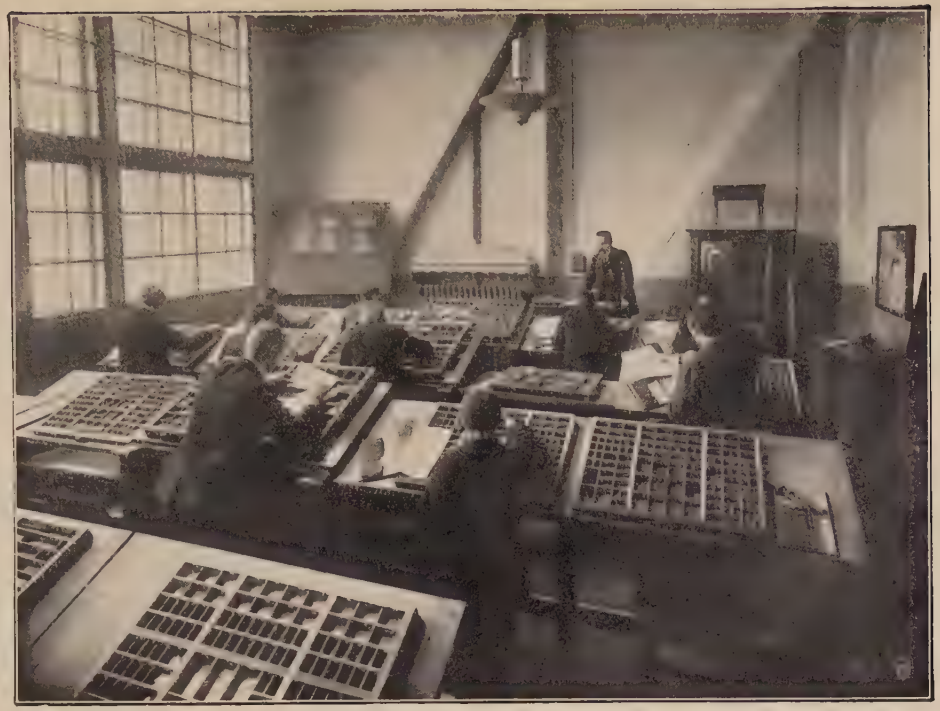
Like the trade continuation schools these "general" continuation schools should include drawing or handiwork, besides literature, with business composition, arithmetic, gymnastics, and instruction in civics. But even here special groups of trades, such as plasterers, musicians, etc., must, where possible, be placed in special classes with a special syllabus.

Example: In order to bring out more clearly the spirit in which trade continuation schools are to be organised it seems advisable to give here the main lines of the plan of organisation of a trade continuation school, and also the curriculum of a "general" continuation school. I have chosen that of the trade continuation school for apprentices in the mechanical trades.

(1) *Outline of the organisation of the trade continuation school for mechanics.*

(*a*) Attendance is compulsory for all apprentices in the mechanical, optical, and electro-technical workshops, as also in the tool factories.

(*b*) In accordance with the proposition of those belonging to the trade, the school comprises for all these pupils four ascending classes of one year each, similar to the "general" continuation school.



CONTINUATION SCHOOL FOR PRINTERS.

(*c*) Paying the closest possible regard to the needs of the trade, the compulsory course comprises the following subjects: religion, trade arithmetic and book-keeping, business composition and reading, hygiene and practical work. To this compulsory instruction is added practical work from 7 to 9 in the evening; for the second to fourth classes voluntary this can be extended to four hours per week.

(*d*) Instruction in the compulsory subjects is, for all classes, nine hours weekly. The hours of instruction fall either on one whole day or on two half days; the lessons beginning at 9 a.m. in the winter months and 6 a.m. in the summer. By means of a suitable arrangement of the various classes on different week-days, a sufficient amount of freedom in the attendance of the pupils is assured.

(*e*) The hours devoted to the various classes are arranged according to subject and year in the following manner:

Subject	Hours per Week.			
	Class			
	1	2	3	4
Religion'	1	1	1	—
Arithmetic and Bookkeeping ...	1	1	1	1
Business Composition and Reading	1	1	1	—
Civics and Hygiene	1	1	1	1
Trade Drawing	3	2	3	3
General Physics	2	—	—	—
Mechanics and Electrotechnics with Practical Work	—	3	2	4
Total	9	9	9	9
Voluntary Practical Work	—	4	4	4

(*f*) Instruction in mechanics and electro-technics is given by a capable master-workman of the trade, or some other expert; other subjects by suitably trained teachers from the Munich elementary or continuation schools.

(*g*) The cost of the instruction is defrayed by the municipality who also provide and equip the necessary buildings. For the present the school is given accommodation in the school building in the Pranckh-strasse.

(*h*) On the other hand support in the shape of machines, materials and exhibits is expected from the large firms engaged in the mechanical and electro-technical trades.

(*j*) Apprentices, who during the four years of compulsory attendance at a continuation school have not made sufficient progress, may be compelled at the instance of their masters or of the school authorities to attend a further partial or complete course. Voluntary attendance at a class or a subject is permitted to apprentices and journeymen who are no longer obliged to attend school. For this voluntary attendance a fee of sixpence per year, for every hour attended in the week, has been fixed.

The management give on demand to pupils who live or are employed at a distance from the school, season train tickets, at the reduced price of 2/- per half year.

(2). *Outline of a "general" continuation school.*

(*a*) Attendance at the "general" continuation school is linked up with the elementary school and lasts for an additional two years. Two graduated classes of one year each have been arranged.

(*b*) Attendance is compulsory for all boys who live or work in Munich and are under obligation to attend a continuation Sunday school, if they do not attend a special trade school, and are not in any other way freed from compulsory attendance.

CONTINUATION SCHOOL FOR DECORATORS.

(*c*) The hours of instruction are divided among the subjects in the following manner:—

Subject	Hours of Instruction	
	First Class	Second Class
Religion	1	1
Composition and Reading	1	1
Arithmetic	2	2
		(The number of hours in these two subjects alternates from week to week.)
Hygiene and Civics	1	1
Gymnastics, Athletic Games, Swimming	1	1
Handicrafts and Drawing	2	2
Total	8	8

Division of subject matter at a "general" continuation school.

(*a*) Religion. This is arranged by the religious authorities.

(*b*) Composition and reading. The teaching of composition enables the pupil to carry out all the more important work of private and business life in a manner orthographically, grammatically and formally correct.

Class I.—Letter writing. Communications with members of the family, relations and friends, with the occasional use of matter from the other lessons. Applications and enquiries, applications for employment, replies *re* situations offered, advertisements, offers or tenders, quotations, the formulæ of letter post.

Class II.—Contracts, business forms, accounts, receipts, complaints, excuses, testimonials, recommendations, letters with regard to debt, sending of

goods on credit, dunning letters, demands, credit notes, communications with public authorities, pupils' diaries, transport forms. Reading lessons in connection with civics are designed to further the moral and general education of the scholar and awaken in him an appreciation and taste for good literature. The school library must also be made to serve this end. From time to time a complete piece of classic literature is to be read. The choice of the reading matter is left to the teacher in each class.

(*c*) Arithmetic. The course of arithmetic must prepare the student for the proper understanding of how to run an ordinary household, and attempt to awaken in him a sense of economy and also produce in him a sufficient degree of skill in trade arithmetic.

Class I.—Earnings of the workman by hour, day, week, month, and year: the daily, weekly, monthly, and yearly expenses of an individual and of a family. Wages book; housekeeping book; monthly and yearly balances; investment of savings and the interest obtained; accounts of purchases and sales; profit and loss; discount; cost of running a business.

Class II.—Arithmetical exercises connected with taxation and insurance matters; simple calculations of areas and cubic content arising out of the instruction in handicraft; bills of exchange and cheques; method of simple book-keeping for a one month's business.

(*d*) Hygiene and civics. This aims at giving the boy an insight into a sensible way of living and includes consequently the laws of hygiene as well as the problems connected with his vocation, the community and the State. Especially it teaches him to understand that the interests of all classes and of all groups of trades are necessarily inter-dependent.

Class I.—Conditions of apprenticeship or labour. Behaviour: manners in the house, in the school, in the street, and in company, to superiors, to teachers, and to employers. Hygiene: the physiology of the human body in general; nourishment, and the uses and

disadvantages of various foods; breathing, and the circulation of the blood, care of the skin, mouth and teeth; housing and clothing; work and recreation; improvement of the senses and care of the nerves. First aid in accidents. The chief sources of disease; the cultivation of cleanliness.

Class II.—History of handicraft in general (housework, work for wages, handwork); the old guilds; the present position of trade and industry; modern associations and unions of employers and workmen; the division of labour; wages; meaning and value of all honest work; the individual and the community; the community, duties of society, social and economic institutions, rights and duties of the citizen, unpaid offices. The State and its duties; duties and rights of the citizen in relation to the State, unpaid offices; the Empire, its foundation, its constitution, and its duties, social laws, commerce and transport in recent times; colonies, uses of the foreign consulates.

(*e*) Gymnastics, athletic games, and swimming. Gymnastics, together with athletic games and swimming, are intended to change the one-sided muscular activity to which employment in unskilled occupations leads, and which has as its result stiffness and awkwardness, into easy and lissom motion; and further to encourage order and subordination. It must arouse a healthy spirit of competition, exercise the will, and lead to self-control.

Classes I. and II.—In the winter session gymnastic exercises with dumb-bells, staves, ladders, and horizontal bars are to be recommended, and the exercises of the highest boys' class should gradually be increased in difficulty. For the summer session, various kinds of indoor and outdoor games are the most suitable. After the preliminary practice in swimming strokes at the gymnasium, methodical swimming lessons should be given in open or covered baths.

(*f*) Manual work and drawing: instruction in

handicraft is intended to arouse the taste for manual activity, and a satisfaction in work connected with a trade, and as far as it is possible it should lead young people who are either without a trade, or are engaged in blind-alley occupations, to join a proper trade. It aims above all at accuracy in work, furthers an acquaintance with the raw materials chiefly used in technical work, namely wood and iron, and with the functions of the tools used for working them. Drawing is connected with the instruction in hand-work. For pupils who have done no drawing before entering the continuation school, a short preliminary course should be introduced to acquaint them with the use of T-square, set-square, and drawing instruments. The subject matter for this preliminary instruction consists of straight-lined surface patterns and decorative designs, including those with curves. Besides this, working drawings for the practical lessons are prepared, and occasionally sketches with measurements. In the practical instruction some of the objects are also made from blue-prints. Boys who have taken part in the handwork of the elementary school eighth year class are helped in both sections, as they continue with both wood and metal work; they simply change from one workshop to the other after the first school year. All other pupils take only one of the sections, either wood or metal work, for both years, the choice being left to their parents

Wood-work. Class I.—Raw material and its essential characteristics; tools used for holding, measuring, and working the material; process of sawing, planing, boring, hewing, shaping; making of specimen pieces, and simple articles of use.

Class II.—The important European and non-European woods; faults and diseases of wood; wood as an article of commerce; usual joints for woodwork; broad and half cross-joints, mitres, dove-tail joints, mortise and tenon joints, mitres for mouldings, coarse-grained woods, butt joints, rafter joints; table and chair joints; simple articles of use.

Metal work. Class I.—Raw materials, whence and how obtained, their chief characteristics; tools for holding, measuring, and working; processes in marking out, chipping, filing, polishing, embossing, raising, twisting, bending, countersinking, drilling; making of specimen pieces and simple objects of use.

Class II.—Continuation of the consideration of the raw materials; work processes; exercises as in Class I., but more advanced; followed by screw-cutting, riffling, cold-drawing, and bending, riveting, fold jointing, bend-over edging, rebating, soldering; simple objects of use.

Voluntary Advanced Classes.

The section for master-workmen and journeymen is connected with the compulsory continuation system. Directly growing out of this are the classes for bookbinders; printers and compositors; wood turners; chimney sweeps; coppersmiths; coachmen; machine builders; mechanics; makers of instruments and gunmakers; metal casters; expert brazers and brassworkers; chasers; tinworkers; installators; metal-spinners; stucco-workers; stone-carvers and masons; watch and clockmakers; decorative painters; bricklayers and carpenters; shopkeepers; smiths and coachbuilders; boot-makers; upholsterers, paperhangers, painters, decorators; art smiths; builders' smiths and fitters; general and furniture joiners; machine mechanics; stone carvers; wood carvers; chasers, engravers and goldsmiths. Besides these there are a large number of separate trade courses, such as are to be found in handworkers' schools in other countries; thus special courses for different kinds of drawing and modelling; calculation, historic style, tools and machines, technology, etc.

These courses are arranged according to the following twenty principles:—

The aims, duties, and methods of the Sunday and evening trade schools are so regulated, that they do not tend to drive the pupil out of his trade.

The trade schools must not in their organisation take into consideration merely the technical education of the pupil; but must keep in mind that the economic and civic aspects of education is the ultimate goal.

The technical courses cover the following ground: freehand, projection, and trade drawing; painting; modelling; embossing and raising; chasing; technology; study of materials and wares; chemistry; physics; geometry; workshop and laboratory instruction.

The business and economic subjects include general arithmetic, bills of exchange, commercial law, calculation of consignments, business composition.

The "general" course deals with economic history, history of handicrafts, commercial geography and geography of transport, hygiene, general information about trade, co-operative societies, insurance law, constitutional law.

If in connection with any trade a trade society exists, it should, as far as possible, be brought into the service of the Sunday and evening schools belonging to that trade, for the purpose of education and of stimulating an interest. A trade has, with the consent of the Chamber of Commerce and the Handworkers' Chamber, the right to recommend to the managing committee suitable teachers for the practical subjects of instruction and that part of the teaching which concerns the trade, its tools and products. Further, the members of the managing committee have the right, after announcing their intention to the director of the school, to attend the instruction and to make suggestions and requests to him concerning the teaching.

These rights are accorded to the trade society in exchange for its undertaking to encourage its members to support the work of the school to the best of their ability by urging workmen to make use of the educational opportunities offered and to provide specimens and models. In the voluntary trade schools

with practical instruction, the trade society defrays the annual expenses for materials used and, as far as its means allow, gives or lends suitable specimens.

The instruction is given on mornings and afternoons of Sundays and holidays, and on weekday evenings.

No Sunday evening trade school may give fewer than five hours per week.

The day trade schools fall into three separate groups:—

(*a*) The day trade schools, with a definite curriculum but little or no practical work, for masters and journeymen anxious to obtain a comprehensive training in drawing in order to fit themselves for work as building managers and draughtsmen, machine draughtsmen, draughtsmen and designers of patterns or furniture, etc. These are called in the organisation simply "Day Trade Schools."

(*b*) The voluntary day trade schools with a definite curriculum, and chiefly devoted to practical work for masters, workmen and journeymen who are desirous of a comprehensive training in industrial art. These are referred to in the organisation as "Training workshops."

(*c*) The voluntary day trade schools without a definite curriculum, for journeymen temporarily unemployed: these schools bear the name "Public Drawing Halls."

The definite curricula of the day trade schools proper and of the workshops must take into account the threefold aim of industrial education mentioned above. No special curricula are provided for the public drawing halls.

The voluntary day trade schools and the workshops are schools for definite trades or groups of trades; the public drawing halls, on the other hand, take pupils of the most varying occupations. The workshops and public drawing halls may also accept a limited number of youths or apprentices. In the workshops their number is limited according to the number of journey-

men attending the school, and conforming with the Regulation of the Chamber of Handicrafts. As a rule, industrial or other trade societies are not invited to share in the organisation or management of the municipal voluntary trade schools and training workshops.

Those private day trade schools and workshops whose current expenses are in the main defrayed by industrial or other trade associations may have the materials and rooms, together with the tools and machines, of the corresponding voluntary trade continuation or Sunday and evening school, placed at their disposal.

In this case the educational authorities of the town participate in the supervision and the organisation of the schools. The voluntary day trade schools and training workshops have a minimum of thirty and a maximum of forty-eight hours work, the public drawing halls from thirty to thirty-six.

The school year of the day trade schools lasts $9\frac{1}{2}$ months, from the 1st of October to the 11th of July; the school year of the workshops is arranged according to a special plan by means of which long holidays may, if necessary, be altogether excluded.

CONTINUATION SCHOOLS FOR GIRLS.

[*See also Chapter IX, where the development of these schools is described.*—Trans.]

The two sections of the continuation school for girls in Munich arrange their curricula as follows:—

(*a*) Section of Domestic Economy.

	Class I.	Class II.	Class III.
(*a*) Compulsory Subjects:			
1. Religion	1	1	1
2. Housekeeping and Hygiene ...	2	2	2
3. German	2	2	2
4. Accounts, and domestic (or in third class, business) book-keeping	1	1	1
5. The training of children ...	–	–	1
Weekly total in hours ...	6	6	7
(*b*) Voluntary Subjects:			
Needlework	2	3	4
French	3	2	2
English	3	2	2
Technical Drawing	6	6	6

(*b*) Commercial Section.

		Class I.	Class II.	Class III.
1.	Religion	1	1	1
2.	German and Business-correspondence	3	3	3
3.	Commercial Arithmetic	2	1	–
	Exchange including			
	Reckoning of bills of exchange ...	–	1	–
	Book-keeping and calculating ...	–	–	2
4.	Stenography	–	1	1
5.	French or English	3	2	2
	Total	9	9	9

The curriculum in the domestic-economy section is organised roughly in accordance with the following principles :—

I. *Housekeeping and Hygiene.*

1. The instruction in Housewifery forms the foundation of all the teaching. The other subjects must be taught in such a way as to advance, expand, deepen and illustrate it, and to inspire it with intellectual vitality.

2. The chief aim here is a training for the sensible management of an ordinary household, as regards food, housing, clothing and linen, and the care of the health of children and of invalids; special attention must also be paid to moral questions.

3. It must be built upon the foundations already laid in the higher classes of the elementary schools, which must now be brought into relation with the home life; the knowledge of natural science which the girl has gained in the elementary school she may now apply to the business of the household.

4. The teaching is not limited to theoretical instruction, it must be based on direct observation, strengthened by experiments and enlivened by comparisons.

5. Arrangement of the subject-matter.

Class I. *Nutrition.* (a) The organs of nutrition for solids and liquids (revision : compare the curriculum of Class I. of the elementary schools). (b) Inorganic foods: 1, water; 2, ice; 3, salt. (c) Animal foods: 1, milk; 2, eggs; 3, meat and fat. (d) Vegetable foods: 1, fruit; 2, cereals and bread; 3, pulse; 4, potatoes; 5, green vegetables; 6, other vegetables; 7, edible mushrooms. (e) Luxuries: 1, sugar, pepper, mustard, etc; 2, coffee, tea, chocolate; 3, beer, wine, brandy (action of alcohol). (f) Synopsis of the necessary alimentary substances; their nutritive value; their combination. (g) Decomposition, digestion, fermentation, putrefaction and preservation of food. (h) Hygiene of nutrition; rules of eating and drinking. (i)

Laying the table. There are also six or eight cooking-lessons yearly (as a continuation of the lessons in the eighth class).

Class II. *Clothing and Housing.* Introduction. (a) The atmosphere. (b) Breathing and circulation of the blood (compare the curriculum of the seventh class). (c) Heat: radiation and evaporation. (d) The temperature of the body.

A. *Clothing.* (a) Clothing materials; tanning, bleaching and dyeing; 1, linen; 2, cotton; 3, silk; 4, wool; 5, fur; 6, skin. (b) Physical properties of the clothing. (c) Hygiene of clothing; taste and propriety in clothing. (d) Wet and dry cleaning of clothes (washing, starching, ironing). (e) Cleansing materials. (f) The bed.

B. *Housing.* (a) Building materials. (b) Physical conditions of the house (situation, formation of the ground, ground-water, drainage, air, light). (c) Heating: 1, materials of combustion; 2, methods of heating. (d) Lighting: 1, materials for lighting; 2, methods of lighting. (e) Precautions in heating and lighting. (f) Ventilation and disinfection. (g) Sanitation. (h) Arrangement of the house. Six to eight cooking lessons yearly are also given.

Class III. *The family.* Introduction. The narrower and broader meanings of the family.

A. *The family in the narrower sense:* (a) Duties of the housewife. (b) The education of children (with thorough practice). (c) The duties of children to their parents. (d) Mistress and servants; duties and rights. (e) The care of invalids, and the question of insurance. (f) Domestic pleasures (festivals, hospitality, visits, social intercourse).

B. *The family in the wider sense:* (a) The community as a family. (b) Business intercourse and conduct. (c) The woman's choice of profession. (d) The business-woman. (e) The mother-country. (f) Public officials. (g) Women's rights in public life (to be dealt with at the same time as d. and e.). Note: in Class III also,

six or eight afternoons must be allowed for cookery-classes. In the preparation of food in Class III, the following subjects must be taken into consideration: 1, feeding of the child; 2, invalid cookery; 3, visiting. In this, simplicity and economy must be sought above all.

II. *German Language.*

1. In German an increase of facility, both in spoken and written expression of thought, is the aim. 2. It is limited to the use of the reading-book and lessons in composition. Orthography and grammar are not taught specially, but as far as necessary they must be combined with the reading and essay-writing. 3. The teaching in German must be brought to bear specially upon the subject of domestic economy, which should in all things be the central point of the entire life of the school. For the rest, the fundamentals laid down in the 'Curriculum for the Elementary schools" hold good in the teaching of German, and especially in the methodical treatment of the pieces selected for reading.

(a) *Reading.* Reading will be considered more for the sake of the subject matter than the style. The subjects from which selections are made may be grouped in all three classes in the following manner: 1. Readings connected with domestic economy, hygiene and education. 2. Ethical readings (church, country and home festivals, natural life, etc.) 3. Introductory to the understanding of German poetry (descriptions, tales, fables, sayings, stories, ballads, poems, dialect-poetry). 4. Geography and history. As no special instruction is given in geography or history, specially adapted reading selections cover the ground. A sound notion of the earth as the dwelling place of man, and as the producer of all the necessities for the satisfaction of human needs, is the object of the lessons in geography; an idea of the connection between geographic and economic conditions is also desirable. The historical instruction must lay stress on the

awakening of love for the mother-country and of a sense of duty, through illustrations from the history of civilisation, and the discussion of prominent historical characters (especially of women).

(b) *Essay.* The first requirement is that the girl should learn to express herself clearly upon all subjects in which she is interested: special importance must be attached to letter-writing. The subjects shall be selected from the following four groups: 1. Themes connected with housewifery, hygiene, and the up-bringing of children. 2. Descriptions from the girl's daily life. 3. German proverbs explained concisely with practical examples. 4. Business essays.

III. *Arithmetic* (1 hour weekly).

Arithmetic must be kept in very close connection with the material of the domestic economy class. The examples must be taken from daily life, and have a direct practical bearing.

Class I.—The questions grouped under the following six headings must be dealt with. 1. Rule-of-three, with examples taken from domestic life. 2. Simple geometry, with examples from domestic life (the origin of the metric system, the connection between linear and other measures and weights). 3. Calculation of the prices of food-stuffs bought retail and wholesale, with application of percentage and discount. Computation of the cost of meals. 4. Calculation of the daily, monthly, and yearly needs of the kitchen; keeping of the household accounts. 5. Calculation of the amount of nourishment contained in different victuals, and of the total nutritive value of a meal. 6. Calculation of the price of cooking utensils.

Class II.—The following groups of subjects are dealt with. 1. Measurement and cost calculation in making, repairing, and cleaning clothing and linen; linen-lists and dowries. 2. Calculation of the expedition of wares with percentage, profit, and discount; freightage, gross, tare, and net. 3. Converting German into foreign money, and *vice versa*, according to exchange rates.

4. Valuation of combustibles according to the quantity used; the results and the cost of different methods (wood, anthracite, peat, briquettes, bore-coal, pit-coal). 5. Calculation with regard to lighting; results and cost of different methods (candles, oil, gas, electricity). 6. Demonstration of calculations on different kinds of household fittings. 7. Expenses of a house (rent, water-rates, taxes, fire and furniture insurance). Entering of these calculations in a simple manner.

Class III.—Six more groups of subjects remain to be dealt with, of which the last two must be taken at the same time as the housewifery class. 1. Essentials of orderly business book-keeping. 2. Entering of a month's business affairs. 3. The probable expenses of housekeeping during one year for four to eight people, (travelling, hospitality, etc.). 4. The fundamentals of exchange. 5. Wages and salary; sickness, accidents, and old-age insurance. 6. Securities and stocks (capital and income-taxes), savings-banks, life-insurance.

IV. *Handwork.*

1. Self-reliance must be encouraged in the making, preserving, and mending of table and bed-linen, and of children's and women's body-linen; acquirement of readiness in making and mending shirts and simple articles of clothing; white-embroidery and crochet-work, as far as is necessary to adorn clothing tastefully and daintily and to arouse and encourage the girl's sense of beauty, knowledge of the properties and values of the most important materials. 2. All the teaching must, as far as possible, fit in with that of the housewifery class. the pupils must also be taught thrift in their use of materials, and adaptability in utilising waste-pieces and remnants as trimming for hats and other clothes; and as bandages, patches, decorations, lining, etc. 3. The work begun at school may be continued at home. In all things practical utility must be aimed at. 4. The following will be practised:—

Class I. Preparation of table, bed and body-linen; cutting-out and making it; adorning it with simple

trimmings such as button-holed borders, embroidered knots and festoons, scalloping, etc.; darning stockings; knitting-in heels; and mending linen.

Class II. Preparations of articles of underclothing; cutting out chemises in the most varied manner and trimming them with embroidery; decorative stitching and crochet; darning and patching material, stockings, knitted things, and linen.

Class III. Making of men's shirts, and articles of clothing for children; making aprons, caps, simple dresses and blouses; mending and darning as in II.

V. *French.*

Class I. The method for the time being is the phonetic method; accordingly in conjunction with use of the reading-book constructed on this method, there will be systematic training in reading and speaking. The very short and easy separate reading-pieces will be studied thoroughly from a grammatical point of view, and the following notions of grammar must be mastered during this year: 1. The article. 2. The noun. 3. The auxiliaries *avoir* and *être*. 4. The adjective (agreement in number and gender). 5. The regular verbs of the first conjugation in the indicative and the imperative. 6. The pronoun (personal, demonstrative, possessive, relative, and interrogative). 7. The numeral. Besides this, from Christmas onwards, some simple reading should be done rather for the sake of the matter than the style. Simple letters, short poems, little reading exercises should be learnt by heart, and dictations given with the vocabulary thus acquired.

Class II. According to the same method, the following grammatical parts of speech must be learnt during this year: 1. Auxiliary verbs in the subjunctive. 2. Adjectives, comparison. 3. The regular verbs in all tenses and moods; *aller* and *envoyer*. 4. Adjectives, indefinite. 5. Pronouns, indefinite. 6. Conjunctions, prepositions, adverbs and interjections. Simple pieces of prose and poetry must be learnt by heart, short

letters be written in imitation of given models, and dictation reproduced.

Class III. The method remains the same as in the preceding years. The grammar is brought to a conclusion: 1, By revision of the regular verbs in all tenses and moods, with the addition of the reflexive verbs; 2, by study of the most important irregular verbs; 3, by completion of the lessons on the pronoun. Only the essentials of the formation of sentences need be learnt. With the help of given models and the dictation extracts, practice must be secured in the writing of business letters. In the domestic economy section, the family letter will take its place. French telegram and advertisement styles.

VI. *English.*

Aims, method and curriculum are the same as in French.

VII. *Technical drawing.*

Technical drawing comprises at present: Drawing from nature and from artificial models; designing decorative plane-models for fixed purposes (carpets, embroideries, textile patterns, painting on china, etc.).

In the autumn of 1914 the girls' continuation school will become compulsory for all girls who do not attend any other school at the end of their eight years' elementary school course. About 11,000 girls will then have still two years of school during six hours a week.

The new obligatory continuation school for girls will be organised on exactly the same principles as the boys' continuation school. There will be, above all, three great main sections, domestic, commercial and technical.

Attendance at the domestic-economy classes will be

compulsory not only to all servant girls, and girls who have chosen no profession or are occupied in the household or the business of their parents as daughters of the house, but also to all those who do untrained work in factories. But it remains open to those who are occupied in the homes or the business of their parents, to choose the commercial course instead of domestic economy.

The commercial course is obligatory for all girls employed in business and in shops ; the technical course to those engaged in trade and industrial occupations as far as they are trained workers. For the trade and industrial course, which is only attended by about twenty (not a sufficient number to make it feasible to build a special technical school), there will be no special classes formed. If a corresponding technical class for boys is available, the girls may attend this class. If not, they must attend the domestic economy course. As all the classes will be organised on strictly technical lines, and as, on the other hand, some further domestic training is desirable also for the commercial and trade pupils, an optional course will be organised besides the compulsory course.

This optional instruction extends not only over the whole domain of the domestic economy course (cooking, sewing, washing, ironing, etc.), but includes, besides, foreign languages, shorthand and type-writing.

Besides this, a special limited course of domestic economy is planned for girls who need no longer attend the obligatory continuation school course.

The teachers will for the most part be engaged permanently, when seen to possess the essential requirements; in all the classes opportunity will be given for practical work (kitchen, washing and ironing rooms, workshops, laboratories, etc.). Practical work will form, as with the boys, the point of departure and the central feature in the whole course.

From the following table can be seen how the attendance at the continuation schools for girls and the

cost of their maintenance has grown. For the years 1908 and 1912 the figures are as follows:

	Attendance		Expenditure in 1,000 marks	
	1908	1912	1908	1912
1. General continuation school for girls	2,100	2,330	74	85
2. Wednesday and Sunday-school ...	7,370	7,800	70	75
3. Girls' eighth class	1,120	1,380	159	206
4. Municipal commercial school for girls	500	590	47	61
5. Trade and Needlework School ...	600	640	62	56
Total	11,650	12,740	412	483

The number of lessons in the Sunday and Wednesday Schools was augmented in 1905 to three; and the occasion was taken to change the curriculum of the Sunday School. Of the three hours, half-an-hour is given in Bavaria, according to law, to the religious instruction prescribed until the sixteenth year of age. Two-and-a-half hours are left for secular work, and they are arranged according to the following table which changes in a three weeks' rotation:

1st week:	1 hour. Housewifery.	¾ hour. Arithmetic.	¾ hour. Reading.
2nd week:	1 hour. Composition.	1 hour. Composition.	½ hour. Reading.
3rd week:	1 hour. Arithmetic.	¾ hour. Housewifery.	¾ hour. Reading.

The curriculum is similar (with limitations of the material) to that of the domestic economy course in the girls' continuation schools.

APPENDIX II

OUTLINE OF A RURAL CONTINUATION SCHOOL.

The purely agricultural continuation schools, *i.e.*, those which have to deal only with agricultural students, have not yet reached a stage of development to allow them to have any real hold on the people. That they should be regarded with favour is, however, all the more necessary when we consider that in the majority of States, and especially in the largest, no regulations exist to impose compulsory attendance in such schools on young people up to their 18th year. And yet these schools may be made just as attractive as the trade continuation schools if great stress is laid on practical training for the life which the pupils will afterwards lead. Once this is attained, they too may be used in the service of civic education. On account of the insufficient means at the disposal of the rural bodies, the continuation schools must be organised on as modest a scale as possible. In many districts it is quite feasible for two or three Education Authorities to unite in founding such a school in order that the expenses may be divided. The cost may also be appreciably reduced by selling the products of the practical work. If, however, these schools are to have any educational influence at all, their course must extend over three years and not fall below the standard of four hours' instruction weekly. The following is the

scheme of such a school opened in Margarethenried in Upper Bavaria.

1. Object of the School.

The continuation of the moral education of the child in general and its civic education in particular, in connection with a corresponding practical training.

2. Length of Attendance.

Three consecutive courses of one year each, continuing directly the courses at the ordinary school. The lessons—apart from religion—amount to a total of four hours per week on an average. It is advisable in the Autumn and Winter months to increase the period to five or six hours, and in Spring and Summer to reduce it to three or two hours. Where necessary in the Spring and Summer the entire course thus reduced can be transferred to Sunday morning, in Autumn and Winter the extra hours can be arranged on week-day afternoons at the end of the lessons in the elementary school. On public holidays there are no classes. Attendance at the continuation school exempts from attendance at the special Sunday schools.

3. Curriculum and Time-table.

For the boys the school work centres around practical fruit-growing and bee-keeping, for the girls around domestic economy. To the boys' course is added training in citizenship, which is developed in a suitable manner from the practical work. In the case of the girls, domestic economy may be extended, where teachers are available, to include practical gardening and poultry keeping. In this case either an hour must be added to the time-table or an hour less be devoted to domestic economy. The subjects of arithmetic and language remain entirely at the disposal of the practical and civic—or domestic, as the case may be—side of the training.

The four hours per week are divided equally among the four subjects. Where no practical work for girls is possible, two hours are given to domestic economy and one each to German and arithmetic.

Choice of Matter and Distribution of Lessons.

(*A*) Rural continuation school for boys. 1. *Practical Instruction* (one hour weekly). (*a*) Fruit growing. *First year:* the essential stages in the life of a fruit tree; nutrition, growth, and reproduction; climate, position, and soil for fruit growing; the use of manures; the planting of orchards. *Second year:* the cultivation of plants in general; the care of orchards and hot-house fruit. *Third year:* Diseases and treatment of trees; marketing; the preparation of a working calendar.

Each pair of pupils receives a definite portion to cultivate. A practical farmer should give the instruction in the presence of the teacher, in case the latter has not the necessary experience himself. On leaving the continuation school each pupil may take home with him some of the trees which have been entrusted to his especial care. The other proceeds of the fruit garden go towards the support of the school. The accounts in connection with this may be kept by capable pupils.

(*b*) Elements of bee-keeping. *First year:* a general notion of the structure of the insects; functions of their organs; development of the bees; workers, drones, queens; division of labour in the hive; pests. *Second year:* Care of the bee; hives, feeding, swarms, hibernation, diseases, and other dangers. *Third year:* the profits of bee-keeping; honey and wax; swarming; fertilisation of flowers by bees; marketing. *Note.*— The classes will be held chiefly at the hive by an experienced bee-keeper of the neighbourhood. The teacher undertakes the supplementary theoretical *instruction* in the school. If he keeps bees himself he may also take over the practical side. In the course of time, and in proportion to the number of pupils, twelve to sixteen hives may be kept. The proceeds serve to assist the upkeep of the school. As above, it is recommended that the accounts of the proceeds be entrusted to capable pupils.

2. *Hygiene and Civics* (one hour weekly). *First year:* Questions of food, housing, and clothing now and in earlier times; rules of health; the development of the peasantry up to the time of the French revolution. *Second year:* the development of the agricultural labourer in the nineteenth century; comparison with the life and conditions of other countries (Russia, Italy, etc). *Third year:* duties arising from the altered economic conditions; agriculturally productive countries; the communication and trade of the world; the farmer as a member of the State; constitution and duties of the State.

3. *Arithmetic and bookkeeping* in connection with hygiene, civics, and the practical work. (One hour weekly.) *First year:* arithmetical exercises with regard to food, housing, clothing, heating, lighting, savings banks, and the investment of savings; daily, monthly, and yearly expenditure; balancing accounts at the end of the year; housekeeping books. *Second year:* the valuation and purchase of manure; cost of bee-hives; cost of bees in winter; buying of hothouse and bush fruit; interest on savings deposits; buying of State bonds; mortgages and the interest on them; estimating discount. *Third year:* accounts dealing with the valuation and sale of fruit, honey, and wax; costs, profits, workmen's insurance; rates, taxes, and fire insurance; stocktaking; income and expenditure of moderate-sized peasant's estate.

4. *Language* in connection with hygiene, civics, and the practical work. (One hour weekly.) (*a*) Reading.—Suitable pieces at the choice of the teacher from the reading book which has been introduced for rural continuation schools. These pieces serve partly to emphasise and supplement the matter taught and partly to develop and foster the moral sense. German classics (*b*) Composition.—This is, as a rule, a business composition. From time to time events from the practical work or from daily life may serve as the subject of written descriptions.

First year: (*a*) Letter inquiries, notices, information, public announcements. *Second year:* Letters ordering goods, accounts, receipts, testimonials, declarations, and promissory notes, bills of exchange.

Third year: Dealings with public bodies of various kinds; filling up of postal and railway forms.

(*b*) Rural Continuation Schools for Girls. 1. Domestic Economy. (Two hours weekly.) *First year:* Nourishment of the body; structure and functions of our digestive organs; milk and eggs; meat and fat; fruit, bread, vegetables; edible fungi of the neighbourhood; sugar, salt, pepper, coffee, tea, cocoa; water, beer, wine, brandy; hygienic rules of nutrition. *Second year:* Clothing and housing; respiration and circulation of the blood; the clothing material usual in the district; hygiene of clothing; cleaning and mending clothes; light and air in the house; lighting and heating; the cultivation of flowers in and about the house; hygienic rules of housing and clothing. *Third year:* Bringing up children; the most essential points in the care of baby; the significance and difficulties of infancy; children's games; education by means of games and domestic work; stories, fairy tales, nursery rhymes, children's songs; training in obedience and self-control; punishments and rewards; training in truthfulness and responsibility. Note.—15 to 20 practical cooking lessons of two hours each should be combined with the theoretical lessons so that half the time at the disposal of the teacher may be devoted to training. The *instruction* on clothing is to be made as *practical* as possible. Of the 80 hours in the year 40 to 60 are to be given to *practical* work (mending, darning, making simple woollen articles), with which theory can also be combined. Where there is a children's home the pupils should take part in the children's occupations and games, tell them stories and sing with them. In any case the occupations of children and simple children's games should be dealt with in the girls' classes. In the same way a store of

fairy tales, stories, children's rhymes, and children's songs should be built up.

2. *Arithmetic* in connection with Housekeeping. (One hour weekly.)

First year: Sums in connection with questions of food; estimating the cost of various meals; calculating as to the proportionate nourishment in various foods; comparisons of foodstuffs according to their nutritive qualities and their cost; shopping; what to store and what to buy for immediate use; savings. *Second year:* Calculations regarding housing and clothing; buying various clothing materials; estimating the cost of the same; burning and heat values; comparison of fuels according to their heating value and cost; discounts in shopping; buying from hawkers and from shops. *Third year:* Family housekeeping; cost of a child in a year; cost of servants; cost of a household with family and servants; income and expenditure in field cultivation, fruit-growing, bee-keeping, forestry, cattle-breeding; yearly house-keeping; housekeeping book.

3. *Language* in connection with housekeeping. (One hour weekly.) (*a*) Reading (as in the continuation school for boys). (*b*) Composition. *First year:* Conventional letters; inquiries and answering questions; cooking recipes; explanations of the *instruction* in housekeeping. *Second year:* Orders, invoices, receipts, references; explanations of the housekeeping lessons. *Third year:* Tales for children; extracts from the training in the education of children; printed forms in connection with postal and railway matters.

Where circumstances permit:—

4. Practical instruction. (One hour weekly.) *First year:* Growing vegetables; peas, beans, cabbages, beet; treatment of seeds and seedlings; treatment of the soil; harvesting; pickling vegetables (*cf.* also housekeeping first year). *Second year:* The Flower Garden; roses, pinks, geraniums; the essential points in the planting and development of plants, with

special reference to wild and cultivated geraniums; cuttings, improvement of roses and pinks. *Third year:* Poultry keeping; the anatomy and habits of fowls; the various breeds; fowl-houses; feeding and general care; diseases; marketing.

The classes require a garden of about one-third of an acre. The garden beds are divided so as to provide one for each pair of girls. A teacher with the suitable experience is required; for instance, the gardener of a neighbouring estate. Where the teacher and his wife have themselves a kitchen garden and fowl-run, they will be able to take over the course. If experienced teachers cannot be obtained, this practical work had better be entirely omitted.

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